





*The Right Hon.^{ble} Viscountess
Scudamore*



719. l. 17. *ap. Bart.*

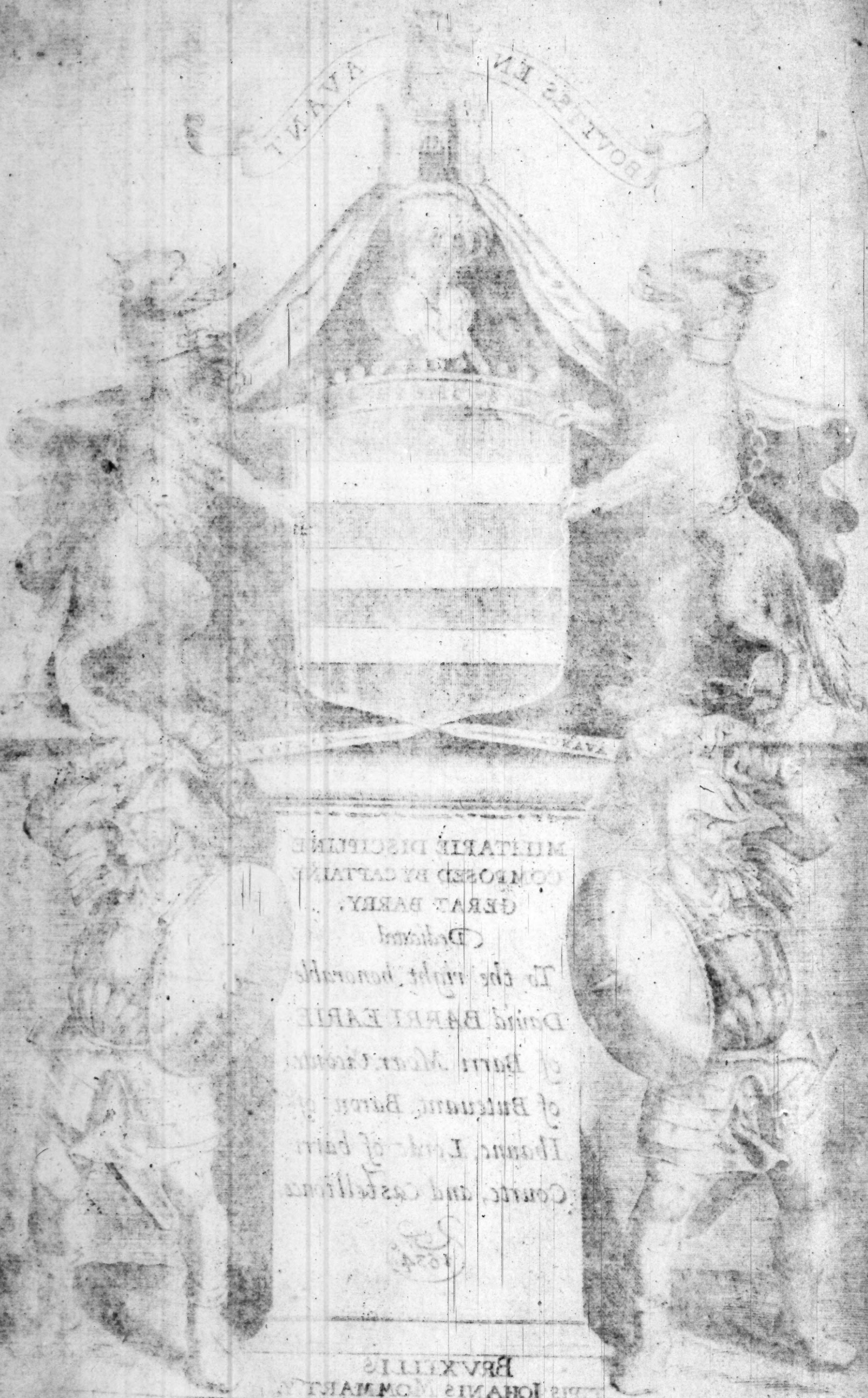


MILITARIE DISCIPLINE
COMPOSED BY CAPTAIN
GERAT BARRY.

Dedicated
To the right honorable
David BARRI EARIE
of Barri Moar, Viconte
of Buteuant, Baron of
Ibaunc, Lorde of barri
Courte, and Castellioncs.

1634.

BRUXELLIS
TIPIS IOHANIS MOMMART Y.



A DISCOURSE
OF
MILITARY
DISCIPLINE,
DEVIDED INTO
THREE BOOCKES.
DECLARINGE

The partes and sufficiencie ordained in a private Souldier, and in each Officer;

*Serving in the Infanterie, till the election and office of the
Captaine generall;*

AND THE LASTE BOOKE TREATINGE OF
Fire-works of rare executiones by sea and lande, as alsoe
of fortifications.

Composed by Captaine GERAT BARRY Irish.



AT BRUXELLS,
By the VVidovve of Jhon Mommart.
M. DC. XXXIV.

A DISCOURSE
OF
MILITARY
DISCIPLINE
DIVIDED INTO
THREE BOOKS.
DECLARING

The parts and duties of each Officer;
The parts and duties of each Soldier;



Belonging to the Infantry; the election and office of the

Captain General;
1751


AND THE LAST BOOK TREATING OF
The duties of the executioners by sea and land, as also
of the punishments

Composed by Captain General BARRY BISHOP.



AT BRUXELLS,
By the Vidove of John Mommaert.
M. DC. XXXIV.

TO THE RIGHT
HONORABLE
DAVID BARRY
EARLE OF
BARRYMOOR,
VICONTE OF BUTEVANTE,
BARON
OF IBAUNE,
LORDE OF
BARRYCOURTE
AND CASTELLIONES, &c.
RIGHTE HONORABLE,

 Havinge tried my fortune in
foraigrie nationes, this thirty
three yeares in this my presente
profession of armes, in his Catho-
like Majesties service, amongst the Spaniard,
Italian, and Irish, meaninge the firste foure year

res in the Real Army of the ocean sea, and the o-
ther 29.yeares in the vvarres, and brave exploi-
tes of the lovve countries, and Germany, as a
Souldior, Pincioner, Aventajado, Alferis, Ajuda-
te, and Captaine. Novve beinge moved by certai-
ne frendes, as alsoe by the greate affection i all
vvayes had to this my presente profession of ar-
mes; Havinge intered so far into the blouddy
boundes of mars. Duriinge vyhiche time i have
imployed my selfe in gatheringe, notinge, and
learninge oute of many brave Auctors, as alsoe
vvhate i have seene my selfe and otheres practi-
fed in vvarr, in many brave exploytes and rare
incounters; all vvhiche itoughte fitt to set dov-
ne in vvrithinge to inlighten my beloved coun-
trimen. Suche as are not skillful in vvarres, and
are desirouse to inter into the noble profession
of Armes; so that therby they may gather some
instructiones, and vvith greater auctORITY and
estimation acomplishe theyre obligationes,
(vvherefore I make bould to dedicate the same
unto youre honour,) vvhiche I vvoulde it vvere
handled by a more perfecte Souldier then my
selfe; soe that it may be the more agreable to
yours incorrupted vertues, and noble inclina-
tion, acordinge to the obligation and love, vvhe-
runto iam bounde, as a true and natural ser-

vante

vante of youre honours, and specially for beinge decended from youre house; as alsoe for the general utility of youre honour, and those of my nation, vvhich are inclined to this honorable exercise; I have taken the paines to vvrite this volume entituled *Military Discipline*, in vvhich is contayned the obseruationes and obligationes of eache one servinge in the Infantry; biginenge vwith a private Souldier to a Captaine generall.

Hopinge youre honour vvill accepte this my vvillinge indevor under youre honours protection, vvith as vvillinge a mynde as i offer the same. Beseechinge the Almightye to bless yove vvith the longe life, and increase of vertue, that yove may follovve the truesteppes, and undeniable prudence, hapines, brave conduction and cesar-like determinationes of youre predecessores, in beinge no inferior to them, but rather revive theyre honour and parpetuall fame, as required and hoped of youre honorable birth and Nobilitie, accordinge the greate expectaciones of youre frendes, and vvell vvisherers, to increase the honour of youre house.

In leavinge a perpetuall memory to all posterity of youre honoures happie proceedinges, as i youre homble servante, and many more of youre frendes vvisheth both to see and heere.

Dated at the Courte of Bruxells the firste of
May. 1634.

VOURE HONOURES

Moste humble servante

CAPT. GERAT BARRY.

Dated

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TO THE READER.



Dentle Reader, be diligente in a pliche your selfe in the noble profession of armes, that your proceedings may the better prosper, and commaunde with prudence and auctority, and i will in deuoure to inlighten youe with the more particular ities of this arte; Soe that youe may the sooner conceive the difficulties and obscurity of many deepe secretes of this noble profession: And consider that there is nothinge soe difficill but that continuall use and exerceice facilitateth the same. It is true that many who have spent the moste parte of theyre time in the profession of armes; Not with standinge they are ingnorante, and unable in accomplishinge with the theyre obligationes with prudence and auctority, and that is resultinge of theyre idle life, and litle desire in well employenge there time, and for to hide theyr rude ingnorance, and litle skill in warr they are wonte to floute, and mocke at those of approved partes and sufficiency.

Suche fellowes moste comonly in occasiones and incounteres with the enemy, (are puseled and amased) and all moste oute of theyre wittes, and that resultinge of theyre rude ingnorance, and litle perfection in warr. Not soe with the prudente and experimented Souldier, who in time of moste neede with a setled mynde maketh notoriouse his resolute determinationes and perfection. Suche brave conductores of vertues and prudente cariage are to by imitated, for that to all posterity they leave a memory of theyre renowned

noumed actes; Soe this fruite of my laboure and longe practice in
warr, together with the desire and affection i allwayes had to in-
lighten my beloved contrimen, and others who are inclined to this
arte.

I doe protecte under the defence of those of renoumed actes, pru-
dente cariadge and perfection in warr. And not to those inclined
to murmur, and full of burninge flames of Diabolicall malice; shew-
inge a milde and amiable countenance, and in theyre deedes in-
fected with pestrificall, ambition, and emulation. The heavens
are grived, and hell rejoyseth for theyre wicked poysoned rancor.
They leave to all posterity a memorie of theyre bad and odious
inclinationes, they are hated by those of verteous life, goode ap-
plicationes, and prudente cariadge, and moſte comonly they finish
theyre lives with a tormented and miserable ende.

Qualis vita, finis ita.

THE

MILITARY
THE
FIRSTE BOOKE

TREATINGE

O F

MILITARY
DISCIPLINE

Composed by Capt.

GERAT BARRY

IRISH.

THE FIRSTE CHAP.

*Declaringe the partes and sufficiency required in
a priuat Souldior.*



E which intereth into the noble profession of armes firste and principally oughte to by a good Christian, fearefull of God and deuote, that therby his proceedings may the better prevaile, and finish with a happy ende. Secondly to buylde his valerouse determinations with a constante and uncorrupted zeale in servinge his prince with geat love and punctuality. Alsoe to by obediente to his Officeres from the loweste to the higheste in degree. If otherwise he by inclined he erreth much, yea and harelly all the goode partes in him can prosper. Litle or no apearance can by of his furtherance or goode success, hardly any body can truste in him, or hope of any good

de proceedinges of his, hee is to by little esteemed in referinge to his chardge any office or comaunde; No man of qualitie and goode partes can truste in him, or keepe him Company.

Hee which intered into this noble profession of armes oughte to shun eschewe and for sake all basenes imagined and thought of manes mynde. And he oughte diligently to applee him self to learne the arte of warr, from whence proceedeth all nobilitie, and wherby, many men of lowe degrees and base linadge haue attayned into high degrees dingnitie and fame, as CAIUS MARIUS decended of poore and vile parentes in a Viladge of the Arpines, came to by a Romaine Emperor; and trough his vertue. VALINCIAN a poure man is son of Cibaly in Hongarie came into the licke dingnitie, and alsoe MAXIMINO borne in a poure Castel in Thrasia, *Nicolas Pichino* a boucheres son by his vertue and valor, came to by Captaine generall of *Philipp* Viconte Dacke of Milan is army and of all the Potentates of Italie.

The Senoria of Venecia was governed by *Francisco Carmanola* a poure man is son, and that trough his prudence and valor. Many more borne of loe degre, and base linadge, came into the licke and semblable dingnity, and creditt, and raised unto honorable degrees and reputation, of perpetuall memory. So let none by ingnorante, that vertue valeur prudente and braue conduction is the true. Way of proceedinge in the noble profession of Armes.

Let him alwayes with a pure and senseare harte aboue all thinges by Carefull to serue God, for although all professions are therunto bounde, yet none more deeply then the braue Souldior, whose actiones are day and nighte in danger of death, (more then anny other) and doupt les he that soe doth a complish, fighteth with a more resolute determination, and suche men mostecomonly are a fisted by the diuine power: fighting in a iuste cause, and with a cleere conscience; Wher of there have beene to many examples, which i have read in antciete Auctores, and noted my self the same in many incounteres.

He is alwayes bounde to by carefull, and vigilante in accomplishing his obligationes, and principally to by obediente. For mishinge this pointe, the other goode partes whiche in him do occur are of litle or noe estimation. Aboue all thinges lett him alwayes liue in the feare of God, and let him by no blasphemers, for in this worlde it is moste odious, and can not escape withoute severe punishmente of his Diuine maiestie. Wherof theyr have beene many examples and we see that such blasphemers in the warres are shot in the mouth, or receive other impe-

impedimentes in the same, and comonly dee a moſte miſerable death, for theyr wicked a cuſtomed inclination to that diabolicall vice.

Let him by carefull choiſe to his comarades and fellowes oulde Souldiers if poſible, and men well acquainted, and of good condition, and to by yerie carefull that they bee no *factioners nor mutineres*, whoſe Company are more dangerous then the diuell, he is to by quiet and frindly, and rather ſeuere then licentious in ſpeeches, for ſuch like perſones moſte comonly doe looſe there eſtimation together with theyr owne quietnes, and are wonte to have many unhappie croſſes in this worlde, and to be litle reputed, and hardly can proſper as wee day ly ſee.

In his diet let him not by to courious nor inclined to delicate meates, rather to diſtribute, well his meanes and contente him ſelfe with ſuch proviſiones, as the campe or place ſhall affourde, for thoſe that are given to there belly, and to the unſatiabie vice of drunknes are apte for nothing, and moſte comonly are ſubject to many diſgraces, wherof theyr are many examples. *Prisco* Captaine of Mauriſh, Emperor of Conſtantinopla, apprehended and defeated the *Kinge of Moſaquo* de Salabia, and his army, who beinge blinde drunk with drinking to muche wine in the ſelebratinge of a certaine ſacrifice don for the ſoule of a brouther of *Moſaquo*. Which blenge killed the eveninge before in a certaine skirmiſh, and the victorious Souldiers havinge ended theyr, figt they fell to eatinge and drinkinge, and for that vice, and there litle care, and beinge found unprovided and forgetfull in a accompliſhing there obligation were defeated, as many more unſatiabie drunkardes and gluttons have beene. There contraries ſuppoſing afterwarde to finde theyre enemy in the like trap, with the like forgetfulnes wherin they were founde. Thinkinge and conſideringe that they were a ſmale diſtance of. They determined to turne, and fall upon them, and revenge them ſelves, and releaſe theyre kinge or die in his recoveringe, which they agreed upon with a reſolute determination: ſoe that *Prisco* nor none of his ſhoulde eſcape, and had itt not beene for a Captaine of horſe named *Gencono* who beinge both prudente and experiment in warr. Comaunded that thoſe under his chardge ſhoulde in no manner take anny liberty in not accompliſhing, with theyre military obligationes. Wherof hee and his officers tooke a ſpetiall care, ſo that at the arivinge of his enemy, and determined to fall on with greate fury, he fell on them with greate courage, and conſtrayned them to retire, and turne theyre backs. And

with the like or semblable fortune *Temires* queene of the Scythians did overcome kinge *Ciro*, and his three hundred thousande Persians in theyre Sluggish, and beastely druncknes, who came to revenge the death of *Sargapiso* hir son, who beeinge before slaine by *Ciro*, and the selfe same successe happened *Achab* kinge of Israel aganiste kinge *Benado* of Ciria, so that trough the inclination which som have to this vice causeth greate disorders, destruction of the common wealth, and rebelliones, wherof theyre are many exaples, Not contentinge them selues with the ability of theyre poore hoste, wher by greate scandles do often tymes arise, causinge townes citties, and provences to revolte from theyr princes, by resultinge of thies unsatiabie drunckardes, which unruly disorderes and filthy examples are to by well looked unto, and severely punished; the *Turantinos* for this vice drived away the Romaines, and theyre Captaine *Cajo Lucio*, and rendered them to *Haniball* his enemye. *Abidio Casio* did soe seaverely punishe his Souldieres for theyre disorders and insolences, that in five dayes space he commaunded to hange al mooste the one haufe of his army, for theyr robberies, and unruly factes comited aganste the contry people: Whiche severitie caused the enemy townes to yealde unto him, and with willinge myndes provided his army vvith vituales, and all other necessities. *Pesenia niger* for takinge a cocke per force from theyre hoste condemned to death a vvhole comarade of Souldieres, *Marques de Pescara* commaunded to cutt of the eares of a Souldier of his for leavinge his order in marchinge, and for his intente to make spoyle in a villadge, (vvhere he vvvas apprehended) the Souldier repleeing to the *Marques* that he vvoulde rather suffer death then receive such an offence, to vvhiche the *Marques* condecended presently, and commaunded to hange him in the firste tree; Greate *Tamberlan* punished soe severlie one of his Souldieres for the like or semblable offence, that the rigor therof did soe corecte and feare his vvhole army, that vvhere his campe did continue three dayes together, a tree full loaded vvith fruite at there departeture remayned vvhole and untoucht (a mer-vayllouse example to all Souldiores to imitate this vertue) and abstaine from all disordered appetites, and patiently with greate courage to indure hunger and misery, when extreame necessitie, soe requireth, as did the army of *Cesar* in the sedge of *Abarico* in France, vvho seeinge the Emperor, takinge greate greefe and compassion of theyre hunger, for vvhich cause he vvvas determined to retire his campe; vvhereunto they vvoulde by no meanes condecend, repleeing that

D I S C I P L I N E.

that firste they shoulde finish theyre lives by chance of cruell fortune or hunger, rather then give over theyre interprice. And with the like constancie valerouse and noble determination they tooke in *Du-raco*, eatinge earbes and rootes: In the honorable regaininge of *Breda* by *Spinola* many examples may be given of the necessitie of theyre Souldiores, and greate constancie, vvhether i have seene many brave Souldiores compelled to extreame and intolerable necessitie, and nevertheless vvoed that they shoulde rather die in that honorable acte then spott theyre honor by runinge a vvay in suche a famous occasion of perpetuall memorie.

Marquis de Pescara with his owne handes kiled two Souldiores findinge them forceinge a gentle vvoman decended of noble linage in the sacke or tacking of *Genoua*. Let him bee carefull to be vvell armed if possible beeing both honorable and profitable, and that besides it licketh much his superiores; Alsoe let him bee carefull in vvell apparelinge him selfe, accordinge to his abilitye and pay, and in no case let him be not overladen with much bagadge vvvhich is a greate impediment in occasions of marchinge, and specially in tyme of service. For wee dayly see that trowgh to much bagadge the whole army is often tymes troubled, and of the same resulteth many disgraces, and som times is wholly loste. It importeth much an honorable Souldier to goe as lighte as may bee possible, without anny impediment that shoulde cause him to bee absente from his colors. Much bagadge in occasions of march causeth much trouble and care, and specially when it is loste as often times happened.

He is to be carefull and vigilante in keepinge his culores or watch with greate puntualitie, and beeing employed in centery or rounde let him be verie warie in accomplishinge his obligaciones, and specially not to fall a sleepe for beeinge soe founde it lieth in the disgracion of the Officer to use him accordinge to his desert, as did *Phirates* in *Corinth* to going in the rounde of that Cittie, and findinge a Souldier a sleepe killed him, when other wise the leaste affronte he coulde have, was to bee in publike punished, and that for example to the reste, that are not wourdie to carie armes for ther careless mindes and litle honor.

Let him looke well not to refuse his Officiers beeinge commanded in occasions of his Majesties service, and be no meanes let him not be absente from his garde beeing on the watch withoute licence of his officer, though he thinketh the place to bee peasable, and of no suspicion. If he thincketh to goe forward, or to bee preferred in this ar-

te he profesheth, he is to accomplish with greate care and punctualitie his obligationes, that bee his care and diligence he may dayly hope of better prefermente. Let him consider that oure predecessores were not Captaines nor Master de campos, nor that they were borne vvith thies offices but rather vvith goode partes, diligence and goode service obtained the same honorable.

Let him not marry if he hopeth to accomplish vvell his obligationes, or to bee preferred, for in o cationes of march if shee goe a longe vvith him hardlie can he vvell accomplish with his obligationes, if his meanes be litle and beinge chardged vvith many children, consider vvhat and how many crosses shall happen, and he muste of force neglecte in accomplishinge the obligationes of an honorable Souldior in the righte performance of the kinges service, or forgoe his wife and children, for he hath inough in accomplishinge vvell vvith the one, and give over the other.

In the corpes de garde he is to behave him selfe sober and honeste, and looke vvell that he fall not unto any quareles, for theyre he giueth bad example, as alsoe sheoweth litle respecte to his Majesties service, and seemeth that he neyther feareth nor respected his Officeres. Wherefore the Officer is to punish him, for suche as are given to quareles in suche places are mooste comonly accounted for couardes, for it is knowen that suche places is not for quareles, nor fightinge, nor by no meanes can be permitted, and so suche as are given to quareles in suche or semblabel places, are accounted for couardes, and for men of litle expectation of theyer valor before theyre enemy, and ought not to escape vvithoute severe punishmente.

He is to be earneste to imitate the goode partes, and verteuise carriage of those vvich raise unto degrees be theyre prudente governmente, and to marke those that are daylie declininge ttough theyr bad and unruly factes; litle fearinge God or man. Of such persones litle expectation can be of theyre furtherance, or happie success, but rather hated and envied by God and the vvorlde; so let him allwayes imitate te beste.

In all places in townes, Citties, or Villadges where he is lodged, let him by kinde and amiable vvith his hoste, and let him demaunde for no delicate meates nor regalose, as som are incliued unto, but rather conforme him selfe with his hoste: For all thinges don vvith amitie in thies ocationes is far better, and more laudable then rigor, and disorderes. Wherof often times resulteth greate scandeles, disgraces, and

revoltes. If it shoulde chance, as som times happened that his patron or hoste shoulde be aman of unreasonable conditiones, let the Souldier then repayre to his Officer that he might by changed into a nother place, or els see his cause remedied better. If it be his chance to happen in the expuungnation of any Cittie towne or forte, let him not be avaritions but rather folowe and Persue the victorie untill such time as his contrarie be wholly yealded, and liöce granted to the spoyle and sacke. Wherin he shall sheowe him selfe neyther covetous nor cruell, (as many gacelesh Souldiores doe) who vvithoute feare or respecte of God or man doe spare no kinde of crueltie uncommitted) with bestiall ravishment both of maydes and vwoomen, vwholie givin to theyre bruthis inclination withoute conscience, reason, or consideration: like vvicked and blinde men, robbinge, of churges and monasteries built for divine sacrifice. Wholy given to theyre disordered filthy appetises, and murtheringe of poore people, and innocentes yealded, which rather to the contrarie they shoulde sheowe them selves fearefull of God, and mercifull to the homble vanquised, and rather defende them then offede them, and in particular the honour of woomen, as did *Don Pedro Conde de Feria*, in the expuungnation of *Dura*, brought all the woomen to the church of that towne, and defended them from the furie of the Emperores people, who at that time were resolved to put all to the sword.

If in batteries, assaults, or in counteres he shall happen to overcome his enemy. Let him be of a generouse determination, and let all his care in executinge the victorie, and in no vwise to attende the spoyle, nor leane his order as doe many nowe adays, like unruled and base factioneres to the greate dishonor of the action and losse of theyre lives, and of litle regarde of theyre owne honor and reputation.

He is to serve and fighte in his prince his cause and desingns with affection and constancie, and he is not to examine vvwhether the cause be juste or unjuste, soe that it be not againste Godes true Religion. But in such ocation he is to looke vvell to his conscience, and to be vvell advised, for Godes cause is to be looked unto above all thinges.

In all ocationes that shall happen or falle oute in the courses of vvarr, and specially in travailes and adversities, he is patiently to indure and suffer them. That thereby his vertue may declare, and make knowne the uncorrupted affection he beareth to his prince, in accomplishinge his obligations, vvith a generouse minde and unspotted constancie, not murmuringe of his slowe paymente, though he be com-

pelled to stande in greates nede therof. And specially let him be mo-
 ste carefull not to yealde, or by any meanes give eare to *Muteries* or
Rebelliones; whiche sometimes resulte of suche cases, and vy whose ende
 mozte comonly is *Sheamesfull death*, vther of there have beene too many
 examples.

He whiche intereth in to this noble profession of vvarr oughte sen-
 ce the day of his asentation to serue his prince with great loue and
 loyaltie, and obey his Officeres and willinglie fighte for a iuste cause,
 for suche vertues seeme to be a similitude of a generouse minde, and
 true religion. As *Platon* saith that loue and obedience are signes of
 a high, and generouse minde, and he that wanted the vertue of obe-
 dience is un wourdie of this name, for cause that trough disobedience
 resulteth the great heste disgrace than can happen to an Army.

Let him be carefull in not murmuringe nor speaking ill of any Of-
 ficer of his nor of a ny that serueth his prince, for it seemeth a bad cu-
 stome; resultinge of litle prudence and respecte, to speake ill of him
 whome he is bounde to defende, and by whome he is to by governed,
 and comanded, but rather honor and respecte him; though his ver-
 tue and goode partes are not a greceable to his obligationes, never-
 theles for bringe a minister to his prince he is thereunto bounde.

Let him by no meanes trough his comarades wife, nor for any thin-
 ge that shoulde give him lawfull occation of discontentement, be-
 cause that of suche like inconueniences and disordered appetites resul-
 teth many quareles and scandeles amonghte Souldieres, and oftener
 kill one a nother trough the same, then for any other ocaton. Ney-
 ther is he to receiue the boy of a nother withoute licence, so that the
 richy he may the better accomplish his Masteres service.

In all ocationes of marchinge, skirmish, incounteres, or assaultes
 with the enemy by force of armes, all Officeres are to by obeyed and
 respected. For it belongeth to them or any of them to see all thinges
 well ordered, and specially where theyre deuotiones fall. Not onelie
 those of his Company or Regimete, but whosoever of the army (be-
 inge so comediouse for the Kinges service.) In such semblable occa-
 siones let him not stande uppon termes, nor disputes as some doe, in
 sayinge I do not knowe youe for my Officer. Let him not by ingno-
 rance therin, because that the Officer may lawfully punish him, for if
 otherwise it falleth oute, and that the Officer doth complaine of him
 to the higher Superiores, he shall by reprehended for his ingnoran-
 ce, for because that at all times and ocationes his owne Officeres
 can

can not be presente, wherefore he is to obey all Officeres.

Let him exercise him selfe in all sorte of Weapones, and of them let him choose the armes whereunto he is moſte affected, and findeth more fit for his purpose, the pike and coſelett amongſte footemen is of moſte eſtimation, for beinge the moſte firmeſte to defende and maintaine a place, beinge vvell ordered and ſett; and ſpecially againſte the furie of horſe. Of manual fire weapons the Muſket is of greateſte execution, nexte to the ſame the caliver, both which are to inuiron, and line the Pikes in theyre due deuotiones, a cordinge as time place and occaſion ſhall require.

Let him practice him ſelfe in eache ſorte of Weapon, to imitate as neere as poſſible the *Ianiſaros* Turcos, who were moſte experte in armes trough theyre continuall exerciſe; And let him frequente the ſworde and target, and ſpecially I woulde wiſh oure Irish to frequente the ſame for beinge more inclined to this ſorte of weapō more then any other Nation, and beſides that of all Nationes none are more fit for the ſame, nor more reſolute. This weapon is of greate importance in many occaſiones, and ſpecially when men cloſe together, or to vive or reſcuedge a ny narowe or ſtraighte paſadge or place as trenches, fortes, batteries, aſſaultes, encamiſada, and for other purpoſes in warr; and ſpecially a bout the cullores orto defende or offende in a ny narrow place.

Let him alwayes a plie him ſelfe vvith affection to vvarlike exerciſes, becauſe that vertue exeleth fortune, and it avayleth him, much to reade hiſtories, and to be experte in Arithmeticke, for it doth both revive and perfectionate manes vvith. There be ſhall he underſtande the cariadge, prudence, and valor of braue men, and baſe inclination of bad perſones, the alteration or decayinge of Kingdomes, and comon vvealthes, the braue and prudente conduction and ſtratagemes of battelles, both vvon and loſte, the vertue and valor of the renowned, the ſhame and infamie of the vile, the maner and uſe of ancient and moderne vvarres vvith the ſtratagemes uſed both for the one and the other.

If he happen to be at the ſiege or takinge of any ſtronge place or fortreſſe, he is diligentlie to vive the ſituation the orderes and induſtrie uſed for the defence therof, and the ſtratagemes uſed for the winninge of the ſame, conſideringe theſe aforeſaide and many more uſed in vvarres, and that vvich toucheth everie Officer in particular, even from a Corporal to a Captaine generall, to the ende he may be

perfecte in the arte he profeseth, that by his vertue he may be ad-
 vanced into greater dignitie, such that this arte he profeseth is the
 moother and true fundation of nobilitie. Therefore reason it is that it
 be perfectly understoode of the Professores and followers thereof,
 seeinge that the practice of mecanicall artes do folowe the same order
 and course to come to the cunnings of theyre crafte. And that besy-
 des, that no man can reduce into perfection those thinges wherof he
 is ignorant, and knoweth not the arte, ywithoute much practice;
 and specially in this soe noble and courious arte, who for the execu-
 tiones therof, vwith prudence and auctoritie is required both longe
 and diligent practice and theorie. It importeth him muche to be a
 goode swimmer which is one of the foure qualities required in a Sould-
 dier, to be rebuste or stronge of boddy, nembles and skillfull in armes,
 and obediante, thies are the foure qualities aforesaide required in a
 Souldier. Thus yove see who manny goode and honorable partes are
 wished to be in a perfect Souldier, not learned he heer say nor gai-
 ned withe ease and yaine glorie, but rather in a plienge him selfe well
 ywith affection, care, diligence, valor, and practice, and specially per-
 fected with learninge and longe exercise in vvarre.

THE SECONDE CHAP.

Treatinge of the election and office of a Corporal in a Companie of Infanterie.



His office of a Corporal is verie antoient for in times
 past in the elections made of Captaines of Infantes-
 rie in theyre reall parentes, no Officeres were elected
 with them but Corporales, and afterwarde were ele-
 cted the offices of Alferifes, and Sargentes; in the ele-
 ction of the aforesaid Officeres the Captaine oughte to doe it with
 great consideracion, and to choose those of greatest vertue and expe-
 riencie, to the ende he mighte be the more beloved and respect; geevin-
 ge them goode exaples, and instructiones, procuring to pacifie they-
 re quarelles, that they may still live in unitie and love like bretherin.
 He is to procure that his squadron be devided into comrades and
 live together in theyr lodgings and all other places withe grea-
 con-

conformitie and love: and if a ny contraverfies shoulde happen or arise betwext them, he is to be verie earneste to see it pacified vvithout delay, and if in case a ny disorderes shoulde fall oute that he can not remedy: Let him vvithoute delay repaire to his Sardgent, Alferis, or Captaine vvich of them firste he can finde, soe that the quarell may be a comotaded in due time.

Let him be carefull to see that theyre armor be neate and servisable, vvithoute a ny empediment or let, that he may be readie vvith the same all times and occationes. Let him not truste onelie to the rowle of his squadron, but rather learne everie Souldieres name in memorie, and where each one lodgedh. Let him teach and instructe the bifones and rawe men who to handle theyre armes, and by experte in the same to a compilsh vvith theyre Kinge, and alsoe for theyre one honor, utilitie, and defence. He is alsoe to be carefull to knowe the qualitie and condicion of eache one of his squadron, for beinge employed in convoy or a ny other separated service, vvherof he is to give a compte. If in his squadron theyre be a ny disordered fellows, and it is alsoe necessary that he knoweth such as are soe inclined to prevente remedie a ganiste theyre unruly disordered appetites.

A Corporall or cavode esquadra beinge employed vvith his squadron in convoyes or a ny seperated vvatch let none be ingnorante that he is to oversee and correcte all disorderes comitted, beinge in ocationes of his Majesties service; or for a ny other kinde of disorder committed, for he is the person that muste yealde accompte to his Superior of all that is refered to his chardge: Wherefore he is to commaunde resolutely such as are comitted to his care and chardge, whome they are to obey and observe his orderes in all that he commaundeth touchinge his Majeties service, and vvhosoever shoulde not obey his directiones as a foresaied of those under his chardge, if be faire meanes he doeth not a complish. Let him severelie punish him with the sworde, but in no case maine the Souldier as some raish and unconfiderate Officeres doeth: But let him alwayes see vvho he commaunded, and a complished the contentes of the order given him accordinge as discreffion time and the occation shall require (and not otherwise. Trough much libertie wee dayly see resulte many disorderes, wherefore obedience muste be observed, and seaveritie minstred, but that vvith greate concideration and equitie, rather then vvith raishnes and litle prudence. For som times some Officeres trough theyre auctoritie blinde and sinister, understandinge doe comit faul-

tes, but the Souldier alwayes is bounde in obedience to his Superiores, but nothinge the furdre in optaininge Iustice.

All viruales and amunitiones that shall be delivered by the Sardgentor furiell to the Corporal, he shall with equalitie devide and distribute the same betwexte the Souldieres of his squadron, vwithoute a ny fraude or parcialitie, and procure that they a comodate themselves in all places vwith amitie like true companiones, and let him selfe in vvourde and deede be carefull and lovinge towards them, so shall he by the better reputed both by his Superiores and Inferiores.

Those that are bisones or rawe men, he is to be carefull in instructinge them, in handelinge theyre armes, and who to serve whith the same because he is to instructe him to stande in his centerie, and who to a complishe his obligationes, to have his peece ready chardged and primmed, and to cock his burninge matche, and soe to presente his peece and who: And beinge a pickemam to terciar or chardge his picke. When the rounde comes let him demaunde for the wourde, and vwith soe lowe a voice in receivinge or giveinge the same, that they may understande one a nother and no higher.

THE THIRDE CHAP.

Treatinge of the Office of a Sardgente of a Companie of Infanterie.

IN the election of a Sardgente it is verie requisite for his Majesties service that the Captaine choose one of goode partes, and approved suficiencie, consistinge in him the molste parte of the observations of Militarie discipline. For it is his Office to execute the orderes given be his Superiores; Wherefore it importeth he be not chosen, by favor nor affection, but rather trough his valor and longe experience in warr: Beinge soe chosen it is a greate repose to his Captaine and Alferis, and all other executiones shall have the better success.

It importeth much that he doe reade and vvrite for many respectes, otherwise hardlie can he vvell per forme his office: it importeth alsoe that he be skilfull in martiall matteres, yea and of soe greate importance, that more tollerable it were that all the other Officieres of
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the company were it the Captaine him selfe to be rawe men, and of litle experiencie, but the Sardgente not soe, who of necessitie oughte to be of approved partes greate care and punctualitie in executinge the orderes given by his Superiores, consistinge in the sufficiencie and care in him required.

It belongeth to him the devitiones of the squadrones of his Company, and see that each Souldier do serve with his complet armes asfented on him in the Kinges liste, he is to oversee which care and diligence all disorderes comitted in his Company, and reprehende factioneres, and not dismeasure him selfe in the same: but rather with moderation to redresh and a comodate all disorderes, and eavell occasions which shall occur. In rackinge and orderinge each sorte of weapon, there are sundrie maner of wayes for theyre devitiones, but allwayes let him put eache sorte of weapō by it self. Touchinge theyre devitiones, and who they shall be ordered, (shall by at lardge declared in the office of the Sardgent Mayor.) Let him be alwayes carefull in the devition of his pickes, in puttinge or plasinge in the vanguard, retergarde, and two flankes theyr beste armed corselotes, and the ensigne or culores in the center. But in offeringe of occasion, of framinge of a squadron he shall observe the order given be the Sardgent Mayor: Sheowinge him selfe with grear diligence, and care in a complishinge whate is refered to his charge, in soe doenge he merite the honor and reputation, and doinge the contrarie, dishonor and shame, wherof resulteth disorderes and loosinge of muche time, and cause of greate discontentement for not acomplishinge and observinge the orderes given. When occasion offereth he is to fighte as vvel as the reste, choylinge a convenient place that he may returne to his office, for it is verie necessarie that he accomplish the obligation, of a prudente carefull, and vigilant Souldier. He shall goe galantlie withe a faire millan hedpeece, and an extraordinarie good collet, and a halbart or generon. But be reason of his overmuch travell and paines his armes by no meanes oughte to be heavie, for if they be soe, hardlye can he well execute his office.

With care and diligence he shall execute in due time the orderes given by his Superiores, not missinge any pointe therein, and if at one time two or three severall Officeres give him order, let him followe the order given be the higher Officer, if it be not recauled, or that he see the occasion to be of importance to his Majesties service. He is to have alwayes a bonte him a liste of all the Souldieres of his Com-

pany squadron by squadron, alsoe he is to be carefull to knowe where every one lodgeth, and whate comarades are together in eache lodginge, and that for many respectes.

He shall and oughte diligentlie to reprehende and procure to drive oute of the Company all factioneres if they doe not amindd, as theeves, dronkardes, quarleres, and revolteres for they are moſte diſcomodiouſe for his Maieſties ſervice; beſides they doe noe goode, butt are rather dangerous. For they are meanes to learne others theyr office, and moſte odious kinde of life; and drawe them to imitate there baſe factes. He is to be verie carefull in all ocationes of marching and imbattelling, to inſtrūct his Souldieres to punctually keepe theyre ranckes obſerve diſtance and file, to handell well and ſerve with theyre armes, and to be verie varie to inſtrūct ſuche as are ingnorante: Whiche for the moſte parte resulteth of the litle ſufficiencie and care of ſome Sardgentes choſen be favor or affection. For wee ſee that ſome Souldieres of longe time have ſerved, and knowed not who to handell theyre armes, nor ſerve with the ſame in time of neede, which reſulte of the litle regarde ſuche perſones have of theyre honor, and litle hope to by advaunced troughe theyre goode partes: But in thies occationes and in many more the Sardgente beinge one that knowethe who to complie well with his dutie and office, can redreſſe thies greates faultes. Butt oherwiſe he beinge unable, you ſhall finde under his chardge ſome Souldieres that in cominge before ther enemy, when occation offer; they neyther knowe howe to handell theyre armes, nor ſerve with the ſame as before ſpoken. To prevente thies and many more faultes, the Captaine beinge vigilante and prudente, ought to by informed of everie thinge in particular, of his inferior Officeres, and he beinge carefull he can prevente eache particular, and ſee them redreſte in due time. Soe ſhall he be the more reſpected and beloved be the honorable Souldieres of his Companie, and ſhall with the more reſolutiō fall on his enemy when occation is offered, and alſoe ſhall manifeſte his care and affection in his Maieſties ſervice.

If he ſhall of his owne motive apprehende a ny Souldier and acquaintinge his Captanie therewith, or a ny other Superior; Let him in no caſe, put him at libertie, but afterwardeſ it apertaineth to him to procure his libertie, by faire meanes.

Let him by no meanes diſplace a ny Souldier from his lodginge to put another in his place, for it lieth not in his power withoute licence

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cence of his Captaine for he hath no auctoritie to drive one bute, and to accommodate another in his place; besides it is a ration of greate discontentement, except he put him oute for disorderes committed betwexte him, and his hoste or comarades; for that lodging is given him by the Prince, and if he be driven oute for an unjuste cause and makinge his complainte to the Master de campe or Colonnell, he shall give him licence to chage his place into another Company for the wronge don unto him, and his Captaine may by justly reprehended for not ministringe justice. He shall permit noe Souldier to put of his armes enteringe into the watch till the Alferis firste be disarmed. In garison the wourde is not to be given, till the gates be shutt, nor in campana til the houre apointed be the Sardgent mayor to sett the finteries, and that to be verie late. Till this houre all oughte to be in armes. In givinge the wourde in all places of importance. It is moste required that it be given with greate silence for many respectes. In receivinge the wourde from his superior Officeres, let him be careful not to forget the same, besides that it is discommodious for his Majesties service, and it shall by rougher that such a fault shall resulte of the little care in him.

In enteringe into a citie towne or place where he shall enter with his Company, he oughte to vnderstand and knowe where the quarters shall be placed, and the course of the roundes, as shall be appointed and ordained by the Sardgent mayor, alsoe he shall with greate punctualitie and care procure to accomplish and execute in due time all the orderes given by the Sardgent mayor, that thereby he may by the prince be honored and affected, besides that it is his obligation.

Let him beware not to be cruell nor inviolent to his Souldiers which is a token of a bad inclination and nature, and of Officeres of litle vertue. If by chance he shoulde by angrie with any Souldier of his, (in turninge his backe he is to forget that furie) and afterwarde shewe him selfe amiable and lovinge, and for they cominge to the knowledge of his honours, they shall have the more care not to anger him; and if other wise he shewe him selfe rigorouse, and inclined to be revenged, they will run away, and he shall fall into disgrace, and shall be hated by his Captaine.

Let him be no meanes presume to flashe or cuffe Souldiers with his swourde, excepte upon juste occasions in his Majesties service, and specially in disputes of plea, or any other particular quarell of his owne. In suche and semblable occasions let him looke wel to himself,

self, for the Souldier in such a particular oweth him but little respect or none at all being therunto constrained, for a Souldier is to defende his life and honor for whiche none can blame him beinge of force thereunto constrained.

THE FOURTHE CHAP.

Treatinge of the election and Office of an Alferish of a Companie of Infanterie.



He chardge and office of an Alferis or Ansign bearer of a Companie of Infanterie is to be reputed as a Captaines lestenant in whose choyfinge, his Captaine is to have many and greate consideraciones. For mbe onche suche a one oughte to by agoo de Souldier, and of bould and valerouse determinaciones, but to by his equal if it may be; both in vertue and discrefion) because that oftentimes in his absence the govermente of the Company dothe belonge to this Officer; And for as much as the ansigne is the true fundation of the Company, and that in the same consisteth the honor both of his and of his Souldiers reputation. It is necessarie that he, unto whome this office is committed have in him the a proved pattes wiffed in a brave Souldier. For the greate truste in him reputed, and that in his Captaines absence he ruleth, and governeth the Companie, and from him the Sardgente and Corporales are to receive the orderes; as they doe from theyre Captaine but the Alferis is not to set at libertie a ny prisoner withoute consente or licence of his Captaine, or o ther superior Officeres, neyther is he to give licence to a ny Souldier to leave the Company. It is necessary to whome this so honorable a chardge is recomended never to a banden it as many brave fellowes have don to theyre perpetuall fame and glorie.

He oughte to goe galante and well armed for many respectes, as in day of battell, or in giveng an assaulte, or in marchinge before his Kinge or Crptaine generall. In ocationes of fightinge withe his enemy, he is to sheow him selfe dreadfull and terrible, with his sowrde in the righte hande, and his culores in the lefte, bravely displaying the same; sheowinge him selfe valiante, and givenge goode examples to the

to the Souldieres, and animatinge them, he is to live and die in defence of the same, with a resolute mynde and brave determinacion, as did the Alferis of *Oloa* in the battell given be Conde Don *Gomes*, and Don *Pedro de Lara*, for the queene *Uraca* of Castilla, againste Don *Alonso* Kinge of Aragon hir husband, in whiche they were overcome, and the Conde slayne cuttinge of the two handes of this Gentleman to quite him of his culores untill which time he never yealded, after which cruell woundes he embrased his culores betwext his armes, and as did an Alferis *Tudesco* in the incounter which Kinge Don *Fernando* de Napoles had with the Frence and Dutch, with his righte hande cutt of, and the leifte sore wounded; and findinge that he coulde doe no more, greepte the culores with his teeth, and toucke houlde at the same till he was flaine. In garison the day that he is to enter unto the watch with his Company; that morninge he is to putt or displaye his culores in his windowe, that it mighte be seene by the Souldieres of his Company, for a true token that that nighte he shall inter the watch, and in settinge the watch he oughte not to disarme him selfe till the gates be shutt, nor in *Campañatill* the wourde be given, and all thinges provided. His Souldieres oughte to imitate him beinge therunto bounde, he givinge them all wayes goode examples and instructions.

He oughte to honor and respecte his Captaine, and accomplish his orderes with love and pnnctualitie, beinge therunto bounde, for the honor don unto him, which his father beinge Captaine coulde doe no more, for no greater honor coulde he give then referinge to his chardge the Kinges culores. Wherefore the Alferis is to forbear with his Captaine in many disputes which happen, rather then sheowe him selfe ungratefull, as some unconfiderate fellows doe. The verie same woulde he wish to him self if he came to that dingnitie and chardge, he is to make muche of the drummeres, and fifes because he may by sure to finde them when o cation is offered, and that he and the Captaine shall see them contented for feare they run a way, consideringe the greate neede he hath of them.

He is to garde his culores well in all places, and tacked a speciall care of the same. Let it be before theyre eyes that they may see itt, for the watch is not a pointed for his person, but for the securitie of his culores, hardly can they give a compte of the same exepte they see itt, neyther doth the Souldier vvell accomplish his obligation exepte itt be soe. It is necessary that he by a man of goode partes, verteuise, of

goode govermente and examples; for thies are required in him, for in the abience of the Captaine the govermente of the Company a pertaineth to him. For he is to give the orderes, and directiones to the Sardgent, Corporalles, and Souldieres of his Company; for one to disharge well this office it cā be with the greater facilitie and auctoritie, havinge exercised him selfe in the manadgeinge, practice, and executinge of other offices and degrees; and douptles it doth further and helpe him in his executiones, that he findeth greater ease in reducinge unto perfection whatesoever shall be recomēded to his chardge; though he can not sometimes but file the smarte of his overmuch travaile, care, and punctualitie. Yett is he vvel pleased and contented, seeinge that his chardge is vvell governed and a complished.

The office of an Alferis or Ansigne bearer is an honorable chardge, and in the muster he is not to empatch him self in the same nor sitt, neyther take, chardge of listinge or vvritinge, excepte urgente necessitie constrain him thereunto. For itt a pertaineth to the furiell, he is still to be armed with his vanable in hande duringe the time his Company passeth muster; allwayes lookinge to his coloures, and ordaine to garde the same vvith the firste Souldieres of his Company, that shall pass muster, and soe succescivelie shall be releevd by those that folowe one after an other, and the Sardgent is to procure that the Company pass in order, and vvith speede as they are called by the Comeffary, for beinge therunto bounde; and eache one shall attend in a complishinge his obligation, that thinges may be the better ordered and dulle finished as it is required.

It is necessarie he knoweth the houses vvhere his Company, doth lodge, and the comarades of each lodginge, and nowe and then to visite them, and informe vvho they live; that thereby he may the better knowe the qualitie goode and badd conditiones of each; that thereby each one mighte be honored and preferred a cordinge as he deserveth. He is alsoe bound to qualifie bee faire meanes some disputes vvwhich happen betwexte them, and the Sardgente; for vvliche disputes sometimes when it comes to the Captaines eares, he is alsoe offended vvith them. To prevēte the one and the other the Alferis oughte to visite them and to by a mediator to pascify all; and specially to satisfie and contente the Souldieres, so that they may have no occasion to run a vvay. For if every Officer fall uppon them and none take theyre parte they muste of force be grived; and perhapes run a vvay. Wherefore it is necessary and utill that the Alferis be carefull as a mediator

diator to a peace thies contraverfies. It is verie neceffarie he be a Cōpanied ftill with goode comarades, men chofen of goode behavioüre valeroufe, and of brave and refolute determinations, for none is more bounde to have fuche comarades then he; for in offeringe of o cations of inconuteres a faultes or battell with the enemy they are to affifte and keepe him with a more willenge minde, in the affaulte or winninge of a any towne or forte of emportance, he is not to putt his colours in any place till the furie of the enemy be wholie vanquifed; orderlie and prudentlie a comodated and prevented; and when all the furie is pafte and duly prevented, he shall putt in his colours into his lodginge, and display the fame in the windowe nexte unto the ftreete, that the Captaine, Officeres, and Souldieres may note, and marcke where the colours are; to repaire unto with fpeede when o catio offereth. And alwayes let him be verie carefull to ordaine a good garde for the fame, and that he him felfe shall looke well thereunto. Let him take a fpecial care that covetoufenes nor difordered a petites doe overkome or mafter him. When all is fetled and pafified quarters shall be devided and a pointed for each Regimente whiche shall be fente in due time be the Sardgent mayor, or his a judante.

In o cation of framinge of squadrones incounteres or affaultes with the enemy, he is to cary his colours displayed, and paffinge be the Captaine generall, he is to advance it bowinge the pointe fome whate downe wardes, but if he pass by the Kinge or Prince he is to bowe almoft to the grounde one of his knees a difference from the generall, and in paffinge by the blessed Sacramente he is to kneele on be the his knees, and with the colours to the grounde fheowinge greate reverence unto the fame, and all his Company in like manner, and theyre armes laied on the grounde till the blessed Sacramente pass, vvithoute ftirreng till they fee theyre Alferis rise upp, and that when the Sacramente is vvholie pafte, duringe whiche time they are to keepe f Silence.

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THE FIFTH CHAP.

*Treatinge of the election and office of a Captaine of a
Companie of Infanterie.*

THE electione of Captaines of Infanterie in Spaine is made be the Counsell of State, and warr, vwhen theyre is a ny leaue or raisinge of men, and vwhen theese places are void epyther in campe or garison, other Captaines are elected in theyre place be the Captaine generall or Visroyes in theyre governmentes. The electiones made by suche personadges shoulde by all lickhood seeme to be goode and sure; notwithstanding it faulethe oute often times that boath Generales and Viseroyes, and alsoe counseleres have misse in the consideration therof, bestowenge those honorable chardges uppon theyr owne followers, frendes, or uppon, greate courtieres, and favorites; vwhereby often times many scandeles and domadges do resulte to the prince, and to the action. For by the meanes, of this inconciderate electiones, many valiante, brave, and skillfull Souldieres do remaine withoute chardge, litle consideringe uppon those of longe seruice, prudente and brave carridge, yea and who have shed theyre bloode with greate valeor, sheowingethem selves in many brave incounteres againt the enemy. O cruell unhappie, and sinister electiones of inale expectaciones, when the verteuouse, prudente, and valerouse Souldier is not thoughte uppon! trough vwhose meanes many scandeles doe arise, and many brave occasiones are losse, vvith the greate dishonor and discomoditie to the prince. And the prudente and brave Souldier remaineth almoste oute of all hope, and almoste of no desire to attempte a ny hanorable enterprize, seeinge that they are neyther honored nor rewarded, and seeinge that *Bisones* and men of litle skill are preferred before them.

To prevente many sinister electiones vvhich often times happeneth, and are more necessarie to be remedied. I woulde wish that in all electiones of those vwho shoulde pretende to be preferred by meanes of favor, or affection as many are, it vvere necessarie they shoulde be comanded to serve; as often times i have seene be prudente and brave

Comaunders, yea and theyre sones and neereſte frendes for example to otheres, and for the obſervation of true diſcipline. To prevent this ſiniſter electiones, vvhetherof reſulteth greate ſhame and loſe both to the prince and contrie. The Kinge of Spaine taketh a good courſe vvhhen ocaſion is preſented to rayſe any newe levies, he ſendes to his Viſeroyes and Generalles of ſeverall States and Provinces, that they ſhoulde choiſe and ſende relation of the ancienteſte Alferiſes and beſte a proved Souldieres in the vvarres, both in vertue, valeor, and ſufficiencie, that ſuche perſones be elected for Captaines, and that alſoe a relation ſhoulde be ſente of the ancienteſte reformed Sardgentes to be elected for Alferiſes, and of Corporalles, Sardgentes, and of brave Souldieres Corporalles. The Viſeroyes and Generalles of righte ſhoulde looke vvell to ſee this orderes yuſtly accompliſhed, conſideringe the emportance therof to his Maieſties ſervice, ſoe ſhall the brave Souldier of longe ſervice prudente and reſolute determinationes be preferred, and advauſed; and otheres imitate theyre a prooved vertue and good applicationes, that there by eache one may with diligence, care, practiſe, and learne this noble arte of vvarre, ſeeinge that eache one is preferred, by theyr vertue deſertes and good partes, but other vviſe vvhhen this electiones are made by favor and affection to biſones of litle ſufficiencie cauſeth greate diſpetationes, and unwilling myndes to attempte honorable enterpriſes, and brave incounteres, ſeeinge by experience that they are neyther honored nor preferred for the ſame. Whiche cauſeth Military diſcipline dayly to fall into greate decay; wherof reſulteth many diſgraces and the loſe of many brave ocaſion, ruine of the comon wealth, and of the happy ſucceſſe of Military diſcipline. He which of righte ſhoulde be choſen for this office ſhoulde by a good Chriſtian, prudente, and of vertueſe cariage, to live with greate temperance and meaſure in his affaires, and to be perfecte in Military diſcipline, that thereby he may with the greater auctoritie comaunde, and be the more reſpected and feared. Hardelie can any coddie reduce unto perfectiõ this honorable charge, excepte he be learned and perfecte in the ſame.

It emporteth much for the prudente government, brave conduction and executions of his Maieſties ſervice, as alſoe for miniſtringe juſtice, and redreſſinge many diſorderes, that he knowe and take a ſpeciall care in the electinge of his Officeres: that thereby his prudence and valeor may be better underſtoode; electinge them as neere equall to him ſelfe as may be poſſible, rather then ſellinge the ſame

THE FIFTH CHAP.

*Treatinge of the election and office of a Captaine of a
Companie of Infanterie.*

HE electione of Captaines of Infanterie in Spaine is made be the Counsell of State, and warr, vwhen theyre is a ny leaue or raisinge of men, and vwhen theese places are voide eyther in campe or garison, other Captaines are elected in theyre place be the Captaine generall or Visroyes in theyre governmentes. The electiones made by suche personadges shoulde by all lickhood seeme to be goode and sure; notwithstanding it faule the oure often times that boath Generales and Viseroyes, and alsoe counseleres have misse in the consideration therof, bestowenge those honorable chardges uppon theyr owne followers, frendes, or uppon, greate courtieres, and favorites; vwhereby often times many scandeles and donadges do resulte to the prince, and to the action. For by the meanes, of thies inconsiderate electiones, many valiante, brave, and skillfull Souldieres do remaine withoute chardge, litle consideringe uppon those of longe seruice, prudente and brave carriage, yea and who have shed theyre bloode with greate valcor, shewinge them selves in many brave incounteres againste the enemy. O cruell unhappie, and sinister electiones of sinale expectaciones, when the verteuouse, prudente, and valerouse Souldier is not thoughte uppon! trough vwhose meanes many scandeles doe arise, and many brave occasions are losse, vvith the greate dishonor and discomfort to the prince. And the prudente and brave Souldier remaineth almoste oute of all hope, and almoste of no desire to attempte a ny hanorable enterprize, seeinge that they are neyther honored nor rewarded, and seeinge that *Bisones* and men of litle skill are preferred before them.

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It emporteth much for the prudente govermente, brave conduction and executions of his Maieſties ſervice, as alſoe for miniſtringe juſtice, and redreſſinge many diſorderes, that he knowe and take a ſpeciall care in the electinge of his Officeres: that there be his prudence and valeor may by the better underſtoode; electinge them as neere equall to him ſelfe as may be poſſible, rather then ſellinge the ſame

after choylinge his Officeres as a foresaied, before he marches vvithe the same, he is firste to cause, the culores, to be bleste, and afterwar- des deliver the same to the Alferis, giving him to understande the ho- nor recomended to his chardge, and that he is allwayes to take a spe- ciall care of the same, and to die in defence therof as before decla- red. Then he is to devide them into squadrones, electinge and namin- ge one squadron for him selfe of those of beste qualities and conditio- nes, for beinge soe necessary and of emportance. For of them mozte comonly he is to choise his Officeres, and consulte with them. In o- cationes of fighte and enconteres with the enemy mozte comonlie they are nexte his owne person, respectinge and honoring them as his owne person, and sometimes they are employed for cavose or Co- maunders of some brave exploytes. It emporteth alsoe that in the o- ther squadrones ther by some particular Souildieres and a ventaja- dos. He is to procure that all by goode Cristianes, and of a goode and verteuse life, to heere mass and often confes for beinge the true fun- dation of happiness; he is to a comodate all disorderes, quarelles, and disputes, that shall happen amongste them, and reprehende those of bad exāples, and dishoneste behavior, and if by faire meanes they doe not a minde to drive them a vway. For factioneres and infamouse fel- lowes are not to be permitted to a Company the Kinges culores, nor to equal them selves vwith the observeres of the noble arte of vvarr. In o- cationes of marchinge with his Company let him procure not to be troubled with much bagadge, and specially to use suche moderation in not permitenge that his Souildieres be overloaden with lugadge, or traishes (as some times happened) butt rather to goe as lighte as may by possible, vwith onelie theyre armor and o- ther litle inescusall necessities, that therby they may vwith the lesser empedimente ma- nadge theyre armes, and fighte with the more resolution in offering o- cation.

In each Company of Infantery it were necessarie theyr shoulde be a feowe horses permitted to some Officeres and particular perso- nes, but not many. Thies horses doe serve for many purposes, and spe- cially to recnoledge passadges, and places vwhere the enemy may be suspected to be in ambuscado; which for suche o- cationes are verie re- quisit, as alsoe to sende vvarninge of sodaine o- cationes of importan- ce. He is not to a tempte o- cationes of litle a peerāce, faringe it shoul- de fall oute unhappilie, excepte he be constrayned therunto of ne- cessitie, for such as do not prevente and forecaste theyre successes in
time

time, are wonte when the o cation offereth to by muche troubled, yea and some times oute of theyre vvittes, he is to by carefull in a complis hing and obseruinge the orderes givē him by the Officers mayores, vvhen manifeste o cation, doth not offer that the a complishinge of suche orderes shoulde be hurtefull.

It is verie necessarie he knoweth eache souldier of his Company by his name, and in o cationes of marchinge that he procure and see that they still observe theyre order and rankes, and not to permit them to stragle hire and there for beinge verie neccesserie for many o cationes, because that greate scādeles doe arise trough the over much liberty of stragleres in spoyling gardines, orchardes, and the houses of the inhabitāce or contrye where they march; wherof resulte greate discorde and discontentment to the inhabitantes for the loshes they receive of some unrulie campaniones. In the redresinge vvherof the Captaine is to be verie carefull, and not to permit them to by rigerouse with theyre holte for theyre meales, butt rather contente them vvith vvhat he can give; and see those that do not observe thies orderes severelie punished. For beinge the obligation of a goode Cristian, and vertuese Souldier.

If o ther wise he doe, hardly can he escape scandales and bad reputation, and besides if it come to the Generall is eares. He and his Officeres are in danger of reprehension, yea and often times see theyre Souldiers hanged before theyre faces, for theyre spoyles don uppon the poore innocent people. Wherfore theyre have beene many punishmentes executed for such and semblable disorderes.

Julius Caesar passinge from Cicilia to Africa againste *Cipio* and Kinge *Juda de Numidia* havinge lefte in that llande the minthe and tenth legion, and afterwarde when he sente for them, beinge informed of the Captaines and other Officeres in permitinge theyre Souldieres to spoyle the contry vvithoute ministringe a ny goode discipline, commanded that they shoulde by broughte in presence of the vvhole army reprehended theyre bad goverment, presently comaunded them to by banished oute of the army, and yvithoute any delay to embarck oute of all Africa. The licke punishmentes did *Duke de Alva* in the vvarres of Portugal, reforminge soe many Captaines for theyres and theyre Souldiers disorderes: They vv ere banished for example to the reste of the Captaines, and Officeres of the army; and soe many Souldieres vv ere executed to death for robberies and stelh that in theyre reconinge vv as founde, that more Souldiers vv ere executed to death by

by justice for theyr disorderes then killed or dead o ther vvise in that vvarr.

Disorderlie shall he governe in vvarr vviche never was practised in the arte; Wherfore it vv ere verie necessary that men chosen for this office shoulde wourdily passe trough all the degries before spoken of, or at leaste parte of them, to the ende he may the better knowe howe to governe and comaunde, and particularlie that he be alwais mindfull to feare God, and to be verteouse and experimented in martiall affaires, in many can thies goode partes be had, and many more, and in suche as they can not be wholie founde, let theyre choyse be made of those of vvhome the mooste are to by founde, because that itt importeth muche the Kinges service, for all observation of military discipline.

If he be comaunded vvith his Company and o ther troupes ioy ned to them as often times do happen to the garde or defence, of a ny place. Let him vvith greate care, vigilance, and valeor animate his Souldieres, and consulthe vvith his Officeres, and beste experimented Souldieres, and beinge resolved let him with all care and speede fortifie and intrince him selfe, as many brave and valiante Captaines have don, sheowing them selves vvith prudence, valeor, and brave conduction, presentinge them selves in all actiones of the firste, with a brave and resolute determination, but let him by verie varie that he a tempte nothinge inconsiderate, and raish as often times happened to ignorant men of litle experience to theyre owne and Companies confusion. To a voide such inconveniences and hasardes let him be verie carefull to a complish and observe the orderes and instructiones given by the higher Comaunders. If o cation do nott offer wher of greater domadge may insue, or a goode o cation to by losse, in whiche Captaines are some times of force to prudently prevente the beste. Let him never deney a ny honorable interprice beinge comaunded thereunto be the Generall or Governor, though he finde it a journey of greate danger. But he is to presente his reasones if he finde o cation necessarie, and soe fall on vvith a valerouse determination.

He shall vvith a generouse mynde and goode vvourkes procure to vv in the good vvill of his Souldieres, a continge them as his sones, and children and that by suche faire meanes, in not sheowing him selfe over coveteouse, and greedy, but rather liberall; still securinge his Souldieres to his abilitie in theyre necessities and vvantes, and not to basely wronge them in robbinge or deceivinge them of theyre payes,

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as some Captaines are wonte to doe; with litle honestie or feare of God, makinge a comon practice therof, trough whiche they win bad fame, and taughte and reputed by theyre higher Comaunders un-
wourdie of the name of a Captaine, and often times are severely punished for the same, and deprived of theyre Companies vvith a iuste sentence.

He is to be verie carefull to visite the centeries and corpes de Garde under his chardge, sheowinge greate diligence, care, and punctualitie in his owne persone, that the Officeres and Souldieres doe imitate him, and precisely accomplish vvith theyre obligationes, accordinge the orderes given by the highe Superiores, and be him.

Let him be carefull that his Souldieres be not given to vice and to much libertie trough there owne negligence, and bad applicationes, all sin fallinge into bad customes, for in permittenge thies unruly factes vvithoute necessarie redress, he offendeth God and his Kinge, for they beinge under his chardge as his familie, he is to cause everie one of them to confess at leaste once in a yeare, and specially in all times and occasions of danger of death as befiteth a goode Cristian to doe.

It is verie necessarie to haue a goode furiell able in Arithmeticke, as also in readinge and vvritinge, and to be one of truste and vvell acquainted, for the liste and reconinges of the Company moste comonly is refered to his chardge, as vvell to pass muster of his Company, as in distributinge munitiones, armes, and a parell vvich are given by the Kinge to the Souldieres; of vvich he is to yealde a compte when it is sought for by the Prince or ministeres, to vvhoose chardge the same a pertayneth, to thies furielles or clearkes dothe a pertaine to receive the orderes for the makinge of quarteres, in townes Viladges and campana, from the furiell mayor as shall be ordained and appointed by him, and moste comonly the distributinge and devidinge of the quarteres are refered to the chardge of the Sardgente. It hapēeth some times that the furiell doth marche with his Company alone, from one place to another, may be of reasonable distance, carienge vvith him his patente or order for the same, goinge for the moste parte before the Companie to cause the quarter to be made att theyre a rivenge. In suche occasions the Captaine is to be verie carefull, that thies persones do not comit greate faultes, as some times happen trough the covetousenes of such persones, resultinge often times troubles to his Captaine, for robbinge and stealinge not onelie in the vvay butt

alsoe in the Villadge vvhether they doe lodge, spoylinge the same and givinge occasion to the inhabitants to run a vway. Whiche disorders soe committed doe often times come to the highe Comaunders eares, and charginge all uppon the Captaine is honor and reputation, and the factioners run a vway for feare of punishment, and sometimes thies furielles or Clearckes in meetinge a goode fellowe doe fall a drinckinge and make goode cheere, and his charge not finished, nor findinge him, nor knowne vvhether to be founde, yea and often times for a peece of money leaves the Company, trustinge to smale comoditie, and it may by in occasiones of mooste necessitie; beinge vveary and vvet to the skin, thinckinge to stopp theyre mouthes vwith envented fables and lyes, for which disorders the Captaine as a father of his Souldiers is to see him severely punished, beinge thereunto bounde for the discharge of his conscience and reputation.

It is verie necessary for the Captaine and Company to have a goode Chapleyn reasonable learned, and specially verteous, and of goode life and examples; But not a frier excepte it be vwith licence of his Superiores. Aboue all o ther professions the arte of vvarre is of mooste danger, soe the Souldier is to be verie earneste to be devote, and of cleere conscience, for he is more neerer dangeres of death then a ny o ther sorte of men; and it is necessarie that he allwayes haue a priest, not far of, for the soules health: To whome he may cōfess at all times and occasiones, accordinge as time and necessitie shall require. In the choysinge and keepinge of thies priestes the Captaines in conscience are bounde to procure that they be verteous and of goode life, if o therwise, itt were far better not to have any at all.

He is of necessitie to have a barber in his Company, and if it be possible of goode skill in this arte, for beinge a verie necessarie instrumente in warr; for when a Souldier is hurte the greateste comforte he can have is a goode barber, that shall cure him vwell, and with speede, for if he depende to be cured by a nother which at all times is not to be had, excepte he sende for him may by a far of; hardlie can he be well cured; and besides he is in danger of deathe. If the wounde or hurte be dangerouse, he is both in danger and trouble: This beinge such a necessarie instrumente in warr and because that Souldiers are men of libertie they fall often times into many disgraces, excepte theyre Officeres have a speciall care to prevente the necessarie remedies. For whiche and for many more dangeres they incurr, it is verie necessarie they have a goode barber as before spoken. And if his pay be not able
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to intertaine him with instrumentes and other necessaries, the Officeres and Souldieres are to further and assiste him, that he may the better, and with a more willinge minde serve them, and accomplish with the more punctualitie his obligationes.

In o cationes of marchinge with his Company, the Captaine, and other Officeres are to by verie earneste that theyre Souldieres doe not dismaunde oute of theyr order, and rankes, (as many unruly factioneres doe) litle regardinge theyre Captaines honor nor theyre owne reputation, as before declared; and at his departinge oute of any towne or viladge where he shall lodge (though it were but for one nightre.) He is to see all disorderes comitted redressed, not opresinge nor a beedinge injuries don to the poore innocente inhabitantes, but rather stay after the Companie till they be cleere oute of the towne or Villadge, givinge order to the Alferis to march to the a pointed place or distance where he is a pointed to mak alto or stande, and alsoe givinge order to the Sardgente to chardge the bagadge with speede; havinge soe don he him selfe is to visite over the quarter and see if there bee any complaintes, and to see them remedied before the Company doe departe. Havinge finised well with his obligation, and desire herein.

It is necessarie he carie withe him in writinge from the Comaunders of that towne or Villadge that they are satisfied with the goode govermente ministred bee the Captaine in not permitinge injuries nor disorderes withoute redress and satisfaction: Havinge accomplished with thies he is to repaire to his Company, callinge the Corporalles that he may knowe, and be well assured if any boddy wantes or no, and then he gives order that the bagadge doe marche in theyre due place, as time and o cation shall require, and the same still accompanied with a garde.

If the countrie be peaceable and of no feare of the enemy, he may yvell comaunde the bagadge to marche in the vangarde, and if other wise let them march in the rergarde or battel, accordinge as he shall suspecte of feare both in the vangarde and reregarde, commandinge the Alferis to leade the Companie, and the Captaine to stay in the reregarde, and the Sardgent to and froe all a longste the flanke of the Company, soe shall they orderlie marche, keepinge theyre ranckes and doinge litle spoyle and disorderes.

Let him cause that they marche still in goode order, givinge warninge to the Sardgente to be verie varie, and vigilante in executinge

the same, soe shall he instructe and perswade his Souldieres to be apte, and readie to goode actiones, and dissaude from unrulie and bad factiones, reprehende faultes and disorderes, and commend valor, vertue, and obedience, that therbey they may be readie and apte to all incounteres and ocationes, which shall or may happen, and indure them by faire meanes. To indure patiently all toyles, discomforties, and wantes, soe that they arise not into mutenies through there impatience bad inclination and govermente which sometimes happen for vvante of goode govermente, and litle care of some Capitaines, in givinge goode instructiones and examples.

Let him be carefull that no Souldier of his Company play nor pane his armes nor a parell, for he which is give to such vice seemed to be of litle shame and of less honor. Wherefore suche unrulie fellowes oughte to be severely punished for there villeny and bad examples. Some times it hapened a Capitaine with his Companie to be employed in secrett services of importance, or may by with parte of his Company; And some Souldieres that are given to learne hire and theyre of newes, doe burste with desire to knowe where he shoulde goe. In suche ocationes the Capitaine oughte to be severe, and not to permit any Souldier to treat or demaunde where he is bounde. For it is a dangerous wourde resultinge of litle prudence, and besides he offendeth muche, for in thies and semblable exploitest there are greates mistakes; wherefore the Capitaine is to sheow him self rigorous to vvho so ever shall presume to intermide in any such foolish and dangerous demaundes, and pardon none that shall intermide in the same, for example to the reste: Happie are those that are considerate scilente and obediente, and do nott intermide in thinges oute of sence, and not a pertaining to them; for comonly of such Souldieres are greates expectationes in time of neede, hopinge all goode correspondance of theyr goode life examples and cariadge. Wherefore suche are still firste preferred, and of moste estimation, vvliche by all reason oughte soe to be: If a Capitaine be carefull that his Officeres doe well a complis theyre dutie and obligationes, he is to procure that they be persones that can reade and vvrite for beinge moste necessarie, for other wise they beinge unable, he can hardely truste to write to them, and specially any thinge of importance, touching his Majesties service, for of force such ocationes muste pass through the handes and understandinge of others, vvhere hardlie he can truste unto, noe sorte of men or professiones are more bounde or more in neede in knowinge to reade

de and vwrite then the Officeres and Communderes of the Souldieres; for often times matteres of greate qualitie secrett and importance to theyre Kinge are recomended to ther care and charge, vvhich requirerh more secrecie, then advertissemences or affaires of marchantes, or any other tradesmen vvhate soeuer, soe that this Officer may be reputeth unable to fully accomplish his obligationes, and he may vwell say that he oweth but litle to his father for not instructinge or learninge him, beinge soe greate a faulte, and specially in this profession.

THE SIXTHE CHAP.

*Treatinge of the election and office of a Sardgent mayor entre-
ringe wih the his Regimente to Garison.*

THE election of the Sardgente mayor of a Regimente is to be choysen and elected of suche as the Master de campe, or Coronel do name or putt in election to the Generall, in this election greate consideration oughte to be taken, and be no meanes the Generall is to give way or intrance to favor nor affection, but rather to vertue, valor, and sufficiencie; for cause that this office is of suche emportance to his Majesties service, and beinge a Generall minister of a whole Regimente of many Companies, and Superiendent of all the Sardgentes of the same, be whose prudence and industrie, the Master de campe or Coronel doth give convenient orderes for the due governmente of his Regimente, in occasions of marchinge, fightinge or imbattelinge, and in other matteres concerninge the same, whereby may be gathered the a proved partes, valor, experience, care, and diligence wished in suche a person.

Who beinge chosen to this degree and office of such importance, we reade that in times paste the generales of the Romaines, and of other nationes trusted the execution of this office to none, but the Generalles them selves administred the same, consideringe that in day of battell the beautie and force therof consisteth in the well orderinge and framinge of the same. (be vvhich the victorie moste comonlie is vvon) for undeniable it is that those that are beste ordered and exercised in vvarre are masteres of the victorie, though they be lesser in

number: Where of theyre have beene to many examples of anciente and brave Auctores, and all a firminge the same, as did a peere in the laste and famousse journey in vvhicke *Haniball Carthagenense* vvas overcome by *Scipio Africano*. Not vvith standinge *Haniball* havinge to his judgemente prevented and ordered all thinges as necessarie and fitt; neverthe less the sagacitie and prudence of *Scipio* vvas at that day soe greate, that it vvas inough to putt them all to flighte, vvith his singular and extraordinarie military prudence. A mongste the Frence and Dutche this office is more esteemed then in o ther places, wherfore it shoulde be alwayes comended to the chardge of the more prudente experimented Captaine that can be had in the Regimente, and to gither with this office they have Companies; soe that they have the name of a Captaine and Sardgente mayor, and profit to gither, and in absence of theyre Coroneles or Master de campos to them by righte belongeth the govermente of the Regimente.

This election of all reason and justice shoulde be provided in one as before spoken, and the counsell of State and vvarr shoulde alwayes have a speciall care to see thies electiones soe preferred, and specially the Generall, rather then chosen by favor, frindsihp, and affection, as some times it falleth oute, recommended to unable bisones, of litle service, and less sufficiencie, Wherof resulteth to many inconveniences, and because that in them doth not occur the a proved and prudente partes and auctoritie required for executinge well this office, Captaines of the Regimente doe give them some times but litle respecte or credit: For this election be all equitie and justice, and for many considerations of importance, oughte to be earnestly soughte a Souldier of the beste opinion and sufficiencie, that a mongste the vvhole Regimente can be had, and that he be verie perfecte in Arithmetick, for beinge the moste necessarie pointe for the executiones of this office, after havinge exercised much in the vvarr. And not elected be no meanes by favor, for beinge an office whoe requireth much abilitye.

Verie many can be founde who have spented theyre time in the warres who are not fitt for this chardge, rather by triall and examination made of his a proved sufficiencie, as with Doctores in winenge theyre chaire of dingnitie be triall of theyr a proved partes and sufficiencie. And he who in his examin representeth him with auctoritie, in givinge the beste reasones, is firste preferred.

For by thies meanes doughtless Souldieres shoulde be the more willinge

linge to study to by perfecte for the optaininge of this soe honorable a chardge by triall of theyre vvoordie deserte. But vvee se it dayly given to persones vvho a plied them selves but litle, neyther in the Theorick or Practice of this arte, and whoe have seene verie fewe o cationes of importance, that by theyre goode and diligente a plicationes they may be the sooner preferred and honored.

This office beinge o ther wise given, the Kinge and o cation is offended; for some to dischardge them selves in this office doe truste to the dialoge of valdesse or to the table or numerato of catanæ novaræ of the State of Venecia, who made a table from 100. to 2000. men to forme squadrones which table they vvore vvonte to carie in theyre poketes, and if the numerato or table be losse, he remaines in darcknes; that besides it dothe not serve in yerie many o cationes nor for many sortes of squadrones. Soe none is to truste to itt, but rather leaerne diligently to shifer and t hereinto to exercise him selfe, which is the true vvay for beinge once perfecte it can not be losse, and he shall with the greater auctoritie and respecte a complish his obligationes.

He is to a complish with the orderes of his Master decampe as a Superior head Governor and Conductor, and justice of his Regimente, but the executiones a pertaineth to the Sardgent mayor, for beinge the principall minister of the same in all o cationes, as well in campaña, as in garison; soe that in the profession of vvarr, it may of all righte by reputed fot an honorable office, and of greate preminiences and truste, and of righte he oughte to by of extraordinarie care at all times.

When o cation offereth he is to by freely permiited to come to speake to his generall, yea and to the verie Kinge beinge in the o cation, noe doore or intrie oughte to hinder or lett him from free lie comenge and goinge at all times, for it is soe required for the execution of his office, as well in receivinge orderes from the Generall, as in deliveringe tha same unto his Master de campe or Coronell, and alsoe in a complishinge and executinge his office. This office is of righte wourthie honeor, and reputation, but til the yeare 1506. amongste the Spanardes they had but smale payes, meaning twentie five crownes a month, buth in the same yeare his Majestie encreased theyre pay with fifeine crownes, which in all is forthy, and together with pates of Captaines and Sardgente mayores, soe that they were equal in meanes with Captaines, and afterwarde they vvore augmented with

with 25. crownes more vvhich in all is 65. crownes vvholie paied, soe that they pass Captaines in meanes and degree at this presente; and the occasion of murmuringe and equalitie betwexte them and the Captaines is set a side: Which of right oughte soe to by; and by them the order of the Generall and Master de campe is given to the Captaines, and there executipnes accordingly accomplished.

For to accomplish vvell with the extraordinarie care and travaile of this office, it were verie necessary that he be provided with two or three goode nages stronge and well proportioned, and that can indure greate travaile, and it is verie necessary that they goe with a faire pace for his more ease: Somtimes occasions doe offer that he weareth oute three or foure horses a day for the well accomplishinge of his office. For the vvell executinge of this office it is verie necessarie to have two ajudantes vvhich are to be chosen of men of longe exercise in vvarr, and of a prooved partes and sufficiencie, presentinge themselves with auctoritie, prudence, and brave cariage, and specially to be verie experte in Arithmeticke, many goode partes are required in thies persones; for some times it hapeneth that the Sardgent mayor is hurte or sicke. In the meane time his ajudante may execute his office; It is verie necessary they have goode meanes to intertaine themselves, and theyre horses; for it faileth oute moste comonly that he traueleth and taketh greater paines then the Sardgent mayor. Wherefore and curinge in him thies besitinge partes, he is to by much esteemed and furthered by the superior Officeres.

To accomplish vvell with his office he muste bee moste vigilante and carefull, he oughte to knowe in memorie the names of all the Officeres of his Regimete, yea and besides of many Souldieres, and to knowe all the Ensignes by theyre coloures. He is alsoe to knowe the Officeres reformed and particular persones; As the Sardgente mayor is the principall minister in executinge the Master de campe is orderes, soe is he to by resolved in executinge the orderes given him by the Sardgente mayor, and that with moderation and love, he is to be verie carefull to accomplish in due time the orderes given by the Master de campe, or Sardgente mayor; And by the intercession of none to omitt any faulte withoute reprehension or necessarie redress.

It is the Sardgente mayoris parte to diligently procure and sollicite with the Prince and Generall, and other superior Officeres for the providinge of armor munitiones, and all other necessaries for the Companies of his Regimete, as poudre, led, match, vituales, &c.

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The which he shall cause to be vwell distributed betwexte the Sardgents, and by them to be delivered to the Corporalles who are to distribute the same betwexte the Souldieres withoute any fraude. He is alsoe to be an uniuersall procurer of all thinges fit and necessarie for the Souldieres soules healtie, in seuerlie punishinge and banishinge publicke and ugie crimes oute of the Companies of his Regiment as theeves, disordered persones of no feare nor shame, as dronckardes and all such as live enfamously, oute of hope of a mendment; and specially blasphemeres, vwho like base and blinde factioners withoute feare and conscience, doe highlie offende his Divine Majestie.

Suche as have a speciall care to see thies haynouse fautes and disorders redressed, and justly punished, oughte and are mooste comonlie to be reputed, fauored, and highlie recommended, and specially by his Divine Majestie for theyre affection and care in accomplishinge his vvill.

He is to be earnestte that the Master de campe doe choyse the dromayor of his Regiment of one that he knoweth to by able in well executinge his office, and that he by noe meanes by elected by favor, but rather for one vwho knoweth to instructe all the dromeres of his Regimente, for beinge one chosen for that effecte: He can assiste in many occasiones in carienge and bringenge of orderes, as shall by more at lardge declared in his election and office. When he shall inter into any towne or place of defence, he is to use greate consideration in the devition of the gardes, and watch therof, and specially if it be a frontier, or place where the enemy is to be muche feared. He shall in no case devide unto every Company the parte or place of the vwall where they ordinarilie shall assiste or keepe, for by cause townes and places of importance have often times beene betrayed, and taken by treason.

The principall cause vvherof hath bene that the Officer and Souldier which selleth that place knoweth the parte and quarter where; ordinarilie he is to watch. Wherefore the Sardgent mayor is to prudently prevente thies haynous plottes, and that no boddy may knowe vvhere he is to garde or vvatch: Som doe cause them to caste the deece otheres to drawe lottes or billetes, and otheres doe ordaine thies devitiones oute of theyre owne heades. And to observe such discipline and order that no Company may fore knowe theyre quarter nor any other boddy cyther litle or greate may knowe the parte of the wall which shall a pertaine unto him, untill the verie time that

the watche by set or a litle before. When occasion shall offer that he shall inter vvith his Regiment to lodge in a ny towne, he or his a judante is to revewe the place or market, to knowe vvhere he may finde a comodious and fitt place to frame a Squadron of his Regimente, and presently after this, he is to revewe all the rampar, and circuide of the towne, carienge a longe vvith him one of his a judantes, and alsoe he is to revewe the gates and corpes de gardes, and a pointe the conveient place for the postes and roundes, and see that vvithin and vvithoute the circuide of the towne that he prevente in due time all thinges necessarie.

He is alsoe to revewe the Master de campe is lodginge, the store houses or magasenes and prison, and to a pointe the necessary gardes. After all he is to relate unto his Master de campe of all the difficulties he findes in; as vvell on the rampar, gardes, and circuide of the same, and vvithoute delay to prevente and redress eache particular vvith speede, and to consulte vvith his Master de campe to see vvho many Companies shall by required or necessarie to inter the vvatch each nighte, and then make his devitiones, and deliver the orderes to his a judante, that he may deliver them to the Sardgentes, and sheovve them the places a pointed for the centeries, and the corpes de garde, and at vvhatte howre they are to sett the cinteries.

He is alsoe to a pointe the places conveniente, and fitt for the coloures, and give the Alferises necessarie instructiones. After that he causes the Drum mayorto joyne all the Dromes, and proclaime the orderes delivered by the Sardgente mayor, then nameinge the Companies that are to be that nighte on the watche, and soe shall he breake the Squadron, leavinge the coloures that are on the vvatch, givinge order to the reste to retire to theyre quarteres; Then shall the a judante directe eache Company to theyre a pointed place, and shall make the divitiones of the gardes as ordained by the Sardgent mayor, deliveringe them the orderes they shall observe, he shall a pointe and provide the garde of the Master de campe, and of the magasenes, or store houses, and alsoe the place of armes vvhere all the Companies and coloures shall repaire unto when a larme or occasion shall be offered.

Havinge made the devitiones of the vvatch, and gardes as before spoken, he is to revewe all the circuide on the outwarde parte, and see if theyre by a ny fitt place for ambuscadose for the enemy, of hedges vvoodes or gardines, and prevent itt vvith all diligence, and
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all necessarie endustrie, so that the enemy may not prevaile in takinge any advantage, as often times itt faileth oute in the morninge at the openinge of the gates. To prevente this he is at the openinge of the gates to comaund foure or five lighte arcabuseros to reveue the campe withoute the gates for the better security, and the reaste of the garde in the meane time vvith theyre armes in theyre handes, and not to vvholly open the gates till thies returne, givinge them order to visit and reveue well all the circuid on the outerwarde side, some 300. paces more or less till he see that theyre is no suspicion. And if they spee the enemy they are all to shoote, and the cinterie above the gates shall presentlie advertice the garde or vvatch, and vvhen otherwise he seeth that they do not spee the enemy the gates may by opened by order of the Officer, that theyre comaundes, and then shall he cause the centeries to be set on the gates and bridged as ocasion may be suspected, not failinge to be verie varie, and carefull in previnting what might insue or mishappen, and specially to be carefull that the Souldieres doe not absent them selves from theyre vvatch, and for feare of stratagemes of treason, it is verie necessary that in each porte or gate vvhere any suspition may be feared, that theyre by two longe sharpe yrones like spittes, vvich shall serve to pass trough from side to side vvagones of hay and strawe, for feare that any men may by secretlie hiden in them. And to lett no men armed pass into the towne, vvithoute order, and specially if it by a frontier or place to by feared much of the enemy. At the shutting of the gates the Officer and Souldieres there a pointed to garde, shall by all in armes till the same be shutt, and the Officer of the vvatch shall looke vvell that the gates be vvell shutt: All beinge soe a complished, the Officer shall sende the Souldieres he thinketh fitt to convoy the keayes to the Governor or cheefe Comaunderes lodginge.

The bagadge of the vvhole Regimiente, interinge to garison is to march in the rergarde vvith a Companie of Souldieres guardinge the same, and the Sardgent mayor and a judante are to goe still a horsebake till all thinges by vvell ordered and provided, until suche time they see that all by lodged. For in the biginēge of such partisiones moste comonlie are many questiones and disputes vvich ought vvith all care and haste to by redreste: In vvich occasiones the Sardgent mayor is to comaunde vvith resolute auctoritie, in ordaininge all thinges to by pacified and redreste, ministringe justice and equitie, not admitenge any disorder vvithoute due redress; causinge his orderes wi-

thout replee to be executed with obedience.

If otherwise it be not accomplished as he firste ordayned, his executions can not vwell prosper, but let him before hande looke that his orderes be prudently given, soe that with this resolution he shall vwell accomplish all: And shall be reputed and respected for a man who knoweth vvhoe to governe and comaunde vwith prudence and auctoritie, and shall be both respected and feared by the Souldieres: When any vando or proclamation is to be given he is to procure with the Master de campe that it be put in vvritenge uppon the corpe de garde that the orderes may be observed and the better understoode be all.

After the proclamation is made, and that none may by ingnorante in understandinge the penalties in the same mentioned, and the executiones accordingly made, (for if otherwise not executed) it were far better not to sett it fourth, but in thies executiones consideration is to be used accordingly as the occasion shall require, after true information by taken of the case.

All Officeres in vvarr are broughte into goode perfection vwith prudence, care, and templane, rather then sheowing him selfe rigorous and licentious in speeches vwith a furious contenance, beinge not therunto constrained, for the Souldier feeleth no punishmente almoste soe grivous as this, vvhich seemeth to him to resulte through ignorance and envie, and of al the reste of the Officeres this bad custome is more odious in the Sargent mayor, beinge the master of vvhome they shoulde by righte learne good examples and instructions, and in vvhome by reason the besittinge partes therunto necessary shoulde acurr; beinge a minister to see fautes redreste.

Such Officeres as doe sheowe them selves, vwith a furious and odious contenance doe oppress theyre condition, vvhich doth not resulte of a generouse minde, and moste comonlie they are hated. But suche as sheowe them selves with a prudent cariage and amiable behavior are muche esteemed, obeyed, honored, and respected, by the Souldieres, and doe binde them in obligatione and repose of minde: But for one contrarie a nother contrary, that if in case the Souldier doe not accomplish his obligationes, as he is bounde to doe. And in doinge the contrarie in comittinge disorderes it is necessarie to punish him severely, yea and soe far that it may sticken into his harte if by faire meanes he dothe not a minde.

Some Officeres of prudente cariage, and amiable behavior doe onelie

lie with a gloomely countenance and good reasons cause theyre Souldiers to tremble, and feare them without any other rigour, and the Souldiers knowinge of ther Officers good inclination, doe both obey love and feare them, findinge by experience that he loveth them and assisteth in time of moste necessity and neede, shewing the good examples, and giuing them good instructions, and knowinge that he hath no rancor, envy, nor revenge in his hart, but rather to courage them in all necessities, and equalling him selfe with them in all dangers and travailes, and to be inclined to redress theyre wantes; in this case they both love and feare him, and endure all dangers and necessities with him, and doe followe him in all perilles with a willing mynde; soe that nothinge doth more contente an honorable Souldier then a lovinge Officer, havinge in him the partes and qualities before declared.

The Sardgente mayor is to give order that if the rounde doe heere any rumor or stirr in the towne or any other place, that he with speede advertice the nexte a dioyninge garde, and that he by no meanes give over his rounde, but continually with care and vigilance visite till his time by expired; And the corpe de garde or vwatche to whom he gave intelligence are bounde with great speede to repayre to a comodate the occasion, as alsoe to give intelligence to the superior Officers if the occasion be of suche importance.

He is alsoe to give order to the Officers of his Regimente, that they have a speciall care, that theyre Souldiers doe not lende armes one to a nother for to inter the garde, for it is a bad custome, of which resulte noe good, for often times a Musquetier lendeth his musket to one that shoulde carie a pike and if in that night doe offer occasion of an alarme both are discomodiouslie provided. And besides when the Musketier is restored of his musket, and interinge with the same into the watche, not remembringe that he lent it, shooteth it freely thinckinge that there is no bullet, (as he charged the same) and the other to whome it was lent leaveth a bullet in it, he shooteth thinckinge no ill and killeth one of those before him (which often time happened) yea and sometimes beinge on the watch, often times the one carries the musket or caliver of his fellowe, and puteth a bullet into the same, the other thinckinge of noe suche matter frily shooteth, and alsoe killeth a nother.

This bad sinister and dangerous custom oughte to be prevented, and to severelie punish the Souldier that did lende his armes, for a re-

medie of thies ingnorante careless and inconsiderate faultes: All prudente and skilfull Souldieres oughte to be verie varie to prevente and dischardge thies dāgerouse chardges before they inter into the watch: Somebaie companiones and covardes dayes of feastes doe chardge theyre peeces vvith bullet and killeth vvith envie and revenge vvho pleaseth them; Wherfore a straighte order oughte to by given to all, that they shoulde be verie varie and in paine of death no Souldier shoulde be founde in suche an acte. Moste necessary it is for a Sardgent mayor to be carefull to exercice his Souldieres in manadginge of theyre armes, and in knowinge howe to serve vvith the same, as alsoe howe to observe theyre order in march and squadron, and fall withoute confusiō into theyre iuste place in battell a ray. All vvich the Sardgente mayor is bounde to instructe, for beinge the master vvho is to learne and leade them; for it belongeth to his chardge and office, and besides it importeth him muche that they be vvell instructed and exercised in martiall affaires, for soe vvith greate facilitie shal he execute his affaires, as did the *Thesarios* to vvwhose chardge be the Romanies was recomended this office, as vvell in filde as in garison.

They iustructed theyre Souldieres in the scoole they, exercised the *Tirones* which were the *Bisones*, or newe Souldieres two times a day, and the *Veteranos* vvhicke vvvas theyre oulde Souldiers once a day: Soe they vvvere very experte as vvell in knowinge howe to manadage theyre armes, as to serve with the same, as alsoe in punctually knowinge to observe order in march and squadron, as alsoe induringe greate travailes.

They alsoe vvvere exercised in runinge, leapinge, shevvminge, and all other exercicee and vertues necessarie and fitenge for warr: They were constrained to march with theyre complet armor both foote, and those that wente a horssbake two dais in a month carienge alsoe with them on theyre backes al^l necessary foode for that jurney, fightinge as it vvvere vvith the enemy, givenge and receivenge the chardge as if it vvvere in a bloody vvvarr, for the space of ten thousand pases in theyre vvhole yurney, cominge and goinge, and vvith this as custumed exercice they were apte and nembles whensoever occasion of service or employmente did offer; Soe that vvith two thousande of these, greater exploytes and executiones vvvere made, then with thirtie thousande bisones or rawe mē, for vvwhich cause they vvvere victorouse counteringe with greate renoome till they vvvere vvholie given to vice idelnes and regalitie.

Trough which meanes they begon to fall into decay; and of they-
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re longe repose and idel life, did resulte a bad and sorowfull ende, for beinge vvholie given to woomen, delicate meates, sleepe, and ease, and of no care to exercice them selves in armes. They became to forget all vertue, to by covardes and fall into decay: Now see a plaine example vvhich happened to one of the moste famouseste Captaines of the vvorkde vvhich was *Anibal Cartagenes* son to *Amilcar* beinge nine yeares oulde vvas broughte to the vvarres and vvas caused to swere to be enemy to the Romaines duringe life, and cominge to the adge to governe an army he marched from Spaine trough France into Italie, vvhere in passinge the river Rodane. The Romaines attendinge him, where he had a moste sore incounter in pasinge the river; But *Aniball* with prudence and greate valeure with tables tember and greate tries made a bridge trough with difficultie and greate hasarde, that at legh- te he paste his army over the river by force of armes, and vvith no lesse endustrie did he pass the hugie montaines of the Alpes, breakinge downe greate rokes and makinge them plaine, where he made a way that his army coulde pass; which contained 120000. of foote and horse, and theyre bagadge on Elefantes and brute beastes, and pased to piamonte vvher he rejoyced of his safe a rivall trough such a trouble some and dangerouse vvay, comfortinge and givinge his to understande that they vv ere oute of danger and trouble, and a rived into a fertill cuntrye abondante of all necessaries besittinge.

Ther havinge reposed his army he touke his jurney towards the river of Trevia in Plasintin, and met vvith the Romaines where he obtained the victorie, and from thence he touke his jurney, and paste by Perula til he came to Trasimeno vvhere he gave an other overtrow to the Romaines, and kilth of them three and twenty thousande. And after this he paste with his army to Pulla in Canas which nowe is Barteta, vvhere he alsoe foughte vvith the Romaines, and had the victorie of them vvith the slaughter of fortie thousande of them, as *Plinius* and *Francisco Petrarca Tuscano* declareth. Soe that he had the bridell vvith Italie sixtime yeares; poseste vvith that brave and prudente conductor skilfull and valerouse army: After this he came to Capua a pleasante cuntrye of vveomen, and other comodities, and theyre gave him self and his army to repose in garisones a longe time, vvhere he and they became idel and forgetfull of all military exerceice, as thoughe they never had managed armes. Which vvas cause of the ruine and perdition of all his army, as they say that Capua vvas a greater perdition to *Anibal* then to the Romaines the losse of Canas, and after
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beinge constrained to pass unto Africa to soucour *Cartago* his countrie, beinge informed that *Cipio* (that famousse Captaine) vvente thither vvith his Romaine army be vvhome *Aniball* vvas overcome; so that his vice longe repose and neglectinge of armes vvas cause of his destruction, as alsoe hapened to many other brave vvarrieres. But this of *Aniball* is a sufficiente example for those that followe the profession of armes, to alwayes houlde and keepe theyre Souldieres in exercice of armes, and that vvith greate care, for feare of destruction. Soe this is a goode and insufficente example for a Sardgent mayor, to alwayes keepe his Souldieres in the exercice of armes, and to imitate still the Romaines in theyre continuall practice; And in case that the moste parte of the Companies of his Regimente are not together vvhere he is residente.

Let him advertice theyre Captaines that they be carefull to exercice theyre Souldieres, and it vvere not amiss that he in the ende of everie three or foure montes shoulde visite them all over, and vvith care exercice them in the ocasions of marchinge and imbateringe; Wherby he shall finde them apte and ready to his will not needinge overmuch paines nor disputes as alwayes muste by with rawe men litle exercised in armes.

In nothinge is he to be more curiouse then in learninge and instructinge them who to observe orderes of marchinge, and in framing with them all sortes of squadrones, and to cause them skirmish fundrie manner of wayes, and cause them to toss the pike, and to be apte in handeling the same, beinge queene of armes and moste noble of all the reste. This office of a Sardgent mayor vvas in times paste called the sariouse or Master who is to instructe military discipline, he which is apte and skilfull in vvell a complishinge the a proved partes ordained for the execution of this office, is fitt for any other office in vvarr, to the verie office of a Master de campe generall, which of all the reste requireth greatesth care and sufficiencie.

Wheresoever the Sardgente mayor shall happen to be vvith his Regimente or vvith parte of the same, (eyther in campana or garison) when the Companies of the same shall inter the watch he is to be presente and take care that the Captaines be vvell armed with faire and complet corseletes, and all peeces therunto a pertaininge, and vvith a faire peeke of sixtine or seventine foote longe, the Musquetier with a complet goode muskett, and that by no meanes it be permitted to cutt any peece of the barell, (as some doe) to lighten it, and such as are
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founde gilthie in this soe greate a faulte oughte to by severlie punished.

They are to be provided vvith goode flasks, and flaskillos, vvith faire and stronge cordes, and hurquillos of six foote vvith theyre yrones on both endes as behooveth, and the Arcabuseros are to be provided with goode caliveres of a stronge and sure barrell fitt to receive a bullet of an once or verie litle less, and a faire frask fraskillo and cordones, the measure of the poudre shall by at leaste a haulfe once or rather more, he is never to wante a bagg of leader with twentie five bullettes, and an yron to strike fyre at all times vvhen occasion shall require, for oftentimes beinge in centery and other places his match is quite gon oute, and then if he can get no fire his poudre is to no purpose at that instante if occasion offer. Some are wonte to carie heade peeces which in many occasions are goode, but that they are to much trouble some in longe marchinges.

Both the Musketeres and Arcabuseres shoulde knowe howe to make match, for sometimes it hapeneth that theyre is no munition, and then is it verie necessarie that the Souldier knoweth to make matche, for hardelie can he ever faile to get flax, but otherwise the Souldier beinge unexpert, and knowinge not to shifte, and alsoe failinge a munition they incur greate dangers; soe that the Souldier ought allwayes to procure with greate care to by couriouse and experte in all thinges that appartaineth to his obligation, for it may well fall oute that he shoulde march in a countrie ingnorante in vvarres, where no match nor a munition is made; Wherefore the brave and carefull Souldier is to thincke alwayes before hande to prevente what mighte in sue after. Soe shall he be not fluted at, but rather much recomended for knowinge vvho with care and prudence to a accomplish his obligation; vvich shall give greate contentmente to his Captaine and reste Officeres.

Fiery weaponies vvithoute theyre full necessities are of no service, vvherfore the prudent, carefull, and honorable Souldier oughte to prevente in due time what he is bounde unto, (in as much as may by possible) soe shall he be highlie esteemed by his Captaine and Officeres. If the Kinge or Prince woulde faine take a veowe of the whole army Regimete be Regimete, and alsoe the Standartes of horse one after an other to pass before him, as did the Spanish army before Kinge *Philip* the II. and the queene *Doña Anna* in the plaine of Cantillana neere to badajoes where the whole army did pass before them,

and soe nere that they plainely vied the visadge of euerie one of them as they passe by, as well of the horse which did firste pass, and afterwarde the Infanterie.

The firste that did pass was the Regiment of Lombardie, which Don Pedro de Sotomayor did leade, a riuenge righte againste the place where his Majestie stode did with grace and speede arbolare his pike turninge his face righte to his Majestie, and made greate reverence as to such a place of so high dignitie a pertaineth, and having accomplished his dutie and obligation withoute stirring did shoulder his pike, and marched in his journey, in the verie same place the firste rancke of pikes that did a rive observed the self same order, and in the selfe same manner did all the other rankes of pikes pass. With him at this time vvas Duke de Alba present, and the prior Don Fernando.

Necessarie it is for a Sardgent mayor to cary still aboute him a table booke or booke of memories, for hardly can he conceive and houlde all thinhes in memorie, and vvhate he vvriteth is sure, of onely the Captaine generall Master de campe generall is he to receive the vvourde, of Governores and other persones the ajudantes are wonte to receive the watch wourde, and other orderes, of the Sardgente that is on the vvatche in absence of the ajudantes, which at all times they can not be presente, and specially in garison.

The Sardgente mayor as a generall procurer of his Regimente, ought to sollicite and procure that the corpes de garde Garitas or cenerie houses be well provided, and the corpes de garde withe a place made of tables or planks wheron the Souldieres may sleepe, and this to be a foote and halfe a bove grounde, and to see that theyre by a conveniente place where the fyrie armes be sett, and alsoe for the pikes. He is to procure withe the townes men that they a comodate the way of the rounde, and that the Garitas be well a comodated that the Souldier may keepe him self and armes drie: That he no meanes be greedy inconsiderate or covetouse, neyther permit or give care to any but that the gardes be vvell provided of fire and lighte, for som Provinces are ext a ordinary and excessive coulede, vvhether yve see many Souldieres not vvell a parreled that after accomplishing theyre dutie, and standinge theyre poste som thre or foure houres (more or lesse) they come bake frisd full of snowe, and vvhether it is no fire to comforte them they die. In conclusion there Officeres, and specially the Sardgente mayor is to be verie earneste in sollicitude

tenge this particular for in wantinge this comoditie of fire and of capotes vvhiche some times the Prince, and some times theyre Captaines do provide them, if ohterwise, it is impossible for the Souldier to escape to frise, for vve see those well a parelled perish for coulde: This and many more occasions of importance can prudente and brave Captaines remedy to theyre greate renoome, and that besides they sheowe theyre affection to his Majesties service; if theyre procuremente can not prosper in this, nor theyre a bilitie reache in remedieng the same they discharde theyr conscience and honor, vvhen they in devor vvith care and diligence to pittie theyre Souldieres in earnestly procuringe for them, vvherunto they are bounde.

If in garison occasion require as mozte comonly it doth, to provide a rounde to visit all over, (if posible it vvere necessary) that an Officer or person of respecte by a pointed for cavo of the same, and that Officer or cavo onely doe cary the watch wourde, for beinge necessary if accasion shoulde by offered that they shoulde be constrayned to come to the wall to learne what the occasion was, or to pass trough the postes that is betwext them and the walles, or to pass by the postes of the corpes de garde, if occasion shoulde presente: It is necessary that the outeward centeries whiche are not under defence nor sure securitie that the vvatch vvourde be not given them, and if by change suche postes shoulde be ingnorance or negligence permit to pass in vvairdes any man; Let him not come to the courte de garde vvithoute an Officer firste to receive him, and informe of his cause.

Thies roundes are to goe very silente and secrett, vvithoute any rumor, and that they enter in no conversation nor other place, butt rather with greate care and vigilance a complish theyre order, and still goe forwarde in visitēge the magasenes or store houses, churches, and church yarges, emptie greate houses, or any other place wher suspition mighte be feared (of joyninges and mutenies.) And he heeringe or understandinge of any rumor or joyning, and beinge therof vvell informed and assured, he is to a quainte vvith greate speede the Sardgent mayor, with one or two as the Officer cavo shall thinke fit, and he shall continue in that place till the Sardgent mayor sende him order, or come him selfe in person in the meane time the rounde is to by verie vigilante and silente. Thies roundes mozte comonly have one thirde parte of Musketes and Arcabuseros, and if theyre be any suspition they are rather to goe stronge then vveake to prevente the empetue of the enemy.

In vvarlike affaires and exercices, all Comaunders ought continually to be vigilante, varie, carefull, and fearefull in nott trustinge to manny, for vve see that in many places that townes and citties doe revolte, when les suspicion is of them; Soe that often times in truste is treason. Therefore the Professores of the noble arte of vvarr are bounde in all places to be varie and vigilante, and continually feare of sodaine improvided disgraces. Continuall exercise and practice in warr is of greate importance, vvhetherfore the Sardgent mayor beinge in garison or els where is never to permitt the Companies under his chardge betwexte vvatch and vvatch to sleepe at home a bove thre nightes, for soe the Souldieres shall by the more apte to indure when occasion shall presente, for doughtles continuall use and exercise helpeth much to compass, and ease difficulte matteres. Whosoever shall be inclined to comitt disorderes, and give bad examples in the corpes de gardes ought to be severelie punished, for suche places are to be respected for reall houses, and he vvho vvithout honor, discipline, and shame doth comit disorderes in a place of such greate respecte, oughte not to escape vvithoute due punishmente.

The Sardgent mayor is to advertice the Captaines of his Regimente not to give licence to anny of theyre Souldieres to pass unto another Regimente, nor oute of the country by no meanes, because that it dothe not lie in his auctority, neyther to give him leave withoute beinge firmed of the Master de campe, or Governor that shall commaunde. Who shall a pointe the dayes fitt to a complishe his journey, and affaires, and in the Vedoria generall noe Souldieres place oughte to be changed unto a nother Company, vvithoute licence of his Captaine, or Master de campe, for som unrulie factioneres are desirouse to have liberty to run the contry to comitt disorderes, and neglecte theyre dutie and obligationes; Spoylinge the country, decea-vinge the Kinge, and dishonoringe theyre nation, and dayly provooke others to that base kinde of life, of no honor feare nor shame. Whosoever shall a sente his place amonghte the Infanterie, and vvho entreth in rancke with the observeres of true discipline, oughte not to be tollerated to lay hande in anny mecanicall trade, for it is not fitt that suche a one shoulde equall him self vvith honorable Souldieres of noble and vertueful life.

Dayes of solme feastes kermishes or fayeres, the Sardgent mayor is to reforce the gardes or vvatches, for in suche time greate congregation of people of other places are wonte to joyne; And at suche times
may

may happen tumultes and revoltes; findinge the men of armes unwarie and unvigilante theyre enemyes may fall upon them and optaine theyre desire, vvherof both notable disgrace and loss may resulte, as by experience hath beene tried in diuerses Provinces and places of importance.

When the Sardgent mayor seteth the vvatche he or one of his ajudantes are to ride a horsbake, and visite all the gardes and rampar, to see if each garde be provided vvith the men a pointed, for some times trough the litle care or forgethfulnes of some Sardgentes, and Corporales they err in the orderes. Wherfore in such occasions by righte they shoulde by severelie reprehende, that they may be the more careful and vigilante, beinge refered to theyre care and truste the repose, and sa fetic of all the reste.

If need require he is to advertice the Captaines of his Regimente, that in suche places where they are with the Master de campe they can give no order to sound the Drom, excepte it by for extreame necessitie, or in time of the watche withoute order of the Master de campe: When occasion shall offer that armes, or any sorte of a munitiones shall be received from the Kinge it a pertaines the Furiell mayor to receive the same, and to yealde a compte to the Kinges ministeres (when it shall besought for) thies a munitiones are to be devided betwext the Companies by the Sardgent mayor, causinge to deliver eache Sardgente whate belongeth to his Company, as he shall thincke conveniente, and fitt for his Majesties service. He is earnestelie to procure to see severelie punished such as are inclined to vices and bad examples, and alsoe to advertice the Captaines of his Regimente, that they asiste in whate toucheth theyre Companies, touchinge this particular for beinge therunto bounde; Soe that all factioneres of base life, as theeves quarleres, mutineres, dronkardes, and suche as are vvholie given to vice may by driven a way, soe that those of good life may live at reste; Beinge in garison with his Regimente, or with parte thereof he is to a pointe, and ordaine where shall eache Company repaire when occation of a larme doth represente to frame his Squadron, and he is alsoe to a pointe each Company of those on the vvatch whate place of the rampar they are to defende, and alsoe he is to give chardge to his ajudante, where they shall asiste that they may accomplish with care, diligence, and perfection, vvhat is refered to theyre chardge, and those orderes beinge once given eache one with greate speede and care shall repaire to a complish his obligation; soe that du-

ringe the time he is framinge his Squadron the reste doe repaire to theyre a pointed places, that of a sodaine all thinges may be prevented in due time, advertisinge that he is to choise the moste convenientest and fitteste place for the framinge of his Squadron, and of less impedimentes of castles, towres, or offensive places nexte adjoyninge.

The Company or Companies that are of the vwatch he is not to permit them to departe the same till firste other Companies doe relieve them, and take possession of the place, but stande in array till the other Companies doe inter, and take possession, and then they are to marche towards theyre quarter, in this manner shall he perceiue those that intred the garde, and those that doe departe from it.

He is not to give the wourde till the gates are shutt, he is to be careful to see all thinges well ordered and accomplished, and see that the Corporalles them selves in person doe a company the Souldieres till he leave them in theyre centeries, where he is to give them the vourde, bringinge backe a long vvith him those that were relived to the corpe de garde, where he is to keepe them that nighte for respecte of the watche wourde, sometimes it happeneth that Corporales of litle discipline and honor, do give the vourde to those that goeth to relive the postes, vvwhich resulte of pure ingnorance, and for theyre ovvne ease, not thincking of the fore reprehension they may have of theyre superior Officeres for that badd and sinister custome: Thies disorderes in no case are to by permitted, for beinge verie dangerouse. In this particular the high dutch is to be comended (for at nighte they cause the Drom to by beaten a gainste every relife,) and the Corporalles doe a company the Souldieres til they leave them in theyre postes, and bringe those that are relived a longe with them to the corpe de garde; but in garison and other places nowe a dayes they use it diferente withoute the sounde of Drom, not failenge in the reste, and the Corporall yealdeth goode a compte of all that a pertaineth to his chardge, and trusteth the care therof to none but to him selfe, to by the more a sured.

Greate and speciall care ought to by taken dayes of the watch that no Souldier of the same doe absente him selfe excepte it by to eate, and the Officer therein oughte to take a goode course in licencinge them orderly by comarades, one after a nother, givinge the straight comaunde to returne vvith all speede. And if they be founde longe absent eyther, drinckinge, pleaing, or pasinge a way the time idell, to severelie see them punished, and to repechende the Sardgente or

te or Corporall that shall licence them beinge in sepetated gardes, and specially dayes of greate feastes and fayres.

Let no Souldier absente him selfe from his vvatch, yea if it were but to change a shurte or bande, beinge bounde such dayes to occupie him selfe in nothinge but in attendinge his vvatch: Some times gamesteres who beinge therunto much inclined not findinge pleainge in theyre ovvne garde do goe unto other vvatches to play, vvho oughte to be severely punished, for the redrefinge of thies faultes, and many more, the ajudantes oughte nowe and then to visitt the courte de gardes, rampares, and centeries, to see many faultes redrefed.

When occasion is offered in pasinge of muster it hapeneth, that some times the Veedor generall, or Contador is sente to see that muster by order of the Generall, In which occasiones the Sardgent mayor is to assiste, in shewing and instructinge the more convenienteste places for the same. As alsoe of all other necessities therunto pertaininge, and he is to repaire and communicate with his Master de campe, and receive the necessary orderes for the same, and at the faulinge of the nighte to comaunde the Drom mayor, and all the Dromeres to joyne in the place or principall corpe de garde, givinge order to the Drom mayor to beate a vando of the muster, not advertisinge the appointed place for the same, for certaine respectes, but rather pasinge the same in severall places that none may knowe where till the verie instant they marche, givinge order to the Drom mayor that he proclaime thatt all Companies be readdy, at the breake of the day to pass muster, and to be carefull to observe the instructiones of the Veedor generall touching the muster, for duringe that time he have full auctority for ministring vvell his office, or vvhosoever is appointed by him for that purpose, givinge firste order to the Company of the Master de campe to marche, and after the same if theyre be Companies of Arcabuseros, and after thos vvchiche he thinketh beste, and in pasinge muster they are to be cauled in the self same maner, one after another as they did formerly enter, advertisinge that the Company or Companies that are on the watch shall marche laste to muster, and the firste that shall pass muster.

The ajudante at this time shall cause the gates of the towne to be shutt, And presentlie after at leaste one of the Companies of the watche shall pass muster, and then the Company of the Master de campe, and after the reste Companies that are tointer the watche,

and

and the reste shall pass muster as they have intered, the muster beinge paste, and the listes confronted, the Sardgent mayor is to get a relation of the number of Souldieres that shall be contained in each Company, and bringe the same to the Master de campe to knowe the full number of the muster of the Companies of his Regimente. Wherof the Sardgent mayor is to have a copie for many respectes: A Sardgente mayor who woulde with prudence and auctoritie have his office vwell executed, it is verie necessarie that he knoweth the qualities and conditiones of eache Captaine of his Regimente, that he may employ eache one with discretion, as time and occasion shall require, consideringe the partes and sufficiencie of eache one, that thereby he may employ each one a cordinge to the partes that in him doth occur: When his Captaine generall, or Master de campe generall, or ordinary Master de campe giveth order for any execution of emportance. Some are goode for all executiones vvhiche are esteemed for perfecte Souldieres, some to fighte with a valerouse determination, others though valiante of unhappie proceedinges, and that resultinge for the moste parte of theyre litle prudence, som otheres doe obey and carefully accomplish with whate they are comaunded by theyre Superiores; of whiche often times happie proceedinges doe resulte; otheres with prudence, valor, auctoritie, and brave conduction.

It is moste necessarie that the Sardgente mayor doe knowe the one, and the other that he may vwith the more securitie employ each one a cordinge as the emportance requireth of eache execution; he is alsoe to knowe the qualitie and condition of the inferior Officers, vvhich are to assiste and who are to be employed a cordinge to the partes and sufficiencie in them: He is to presente him selfe with auctoritie, and brave resolution, reprehendiges fautes and disorderes with discretion, vvhiche shall oblige them to obey and accomplish theyre obligationes vwith love, he is to instructe them and shewe them goode examples, as vwell in the exercise of theyr armes, as in accomplishinge theyre obligationes with punctualitie, he is to comaunde vwith prudence and great resolution, for beinge soe moste required for the executiones of his office, but with prudente consideration, for vvhich it is required that he be of a sober and gentle mynde for otherwise hardly can he bringe to pass his obligation in this, and specially in winenge the love of the Souldiers. The Sardgente mayor is to visite nowe and then the postes or centeries, instructinge them

them who to handel theyre armes and comaundinge them to let none pass by nighte tyme, nor permit none come nere him, withoute firste givinge the wourde, though it were his Captaine or Master de campe, and the Souldier that otherwise permitte a ny to pass is to be reprehended, for ocation may be invented at nighte of greate importance, and soe it is verie necessary that none be permitted to come neere the centerie, withoute firste givinge the vvourde, and that for many respectes. Yea and if it were his Officer presuminge that he knowveth him, and intreating and repleeing to lett him pass, he is to answer, vvith areolute determination, and say i knovve none but he that giveth the vvourde for soe doth he vvell a complish his obligation. In garison he shall comaunde the maner and vvho the roundes shall be distributed, whiche is the mozte and sureste securitie of the place, and whē he him selfe shall rounde by night tyme to discover redress and reprehende the faultes and negligences of the roundes and cinteries; he is to bid him selfe and aproache verie secretlie to perceive the care and punctualitie of the rounde, and if otherwise he finde him still, or vvith rumor in theyre journey not attendinge the outewarde as the inwarde side of the vvall, he is to severely reprehēde them. For the more securitie of a place dependeth on the care and prudence of the rounde: Alsoe if he findes the centeries negligente and careles in not a complishinge theyr obligation, let him see them severelie punished, that ther by it may be an exemple both for them and otheres to complish vvith greate vigilance and care theyre obligationes. Some Sardgent mayores for theyre better securitie doe carie at nighte a target, because that often tymes unruly factioneres doe pass at nighte and comittt many disgraces; Soe it is not amiss he goeth vvell provided to prevente theyre unruly tached inclinasionēs, he is to use greate discressiō, and moderatiō vvith the cinteries in goenge the rounde. The ajudante is to rounde alsoe novve and then to secōnde the Sardgente mayor in differente nightes as ordained by the Sardgent mayor, imitatenge the steppes and order of his Master, and he is to informe of the cinteries if they hearde any rumor or ocation eyther vvithoute or vvithin, givinge the cinteries goode instructiones, as alsoe in the corpes de garde or vvatches, and sheowe him selfe amiable to the Souldieres, and reprehindinge theyre faultes vvith prudente reasones. Soe shall he by both feared and beloved.

The Officeres of the vvatches are alsoe to a siste in visitenge the cinteries as ordayned by the Sardgent mayor, and that with scilence and

Vigilance demaunding the cinteries if they have hearde any thinge, soethat remedy mighte be prevented in due time if ocation require.

And specially the Corporall, in giuinge each Souldier to understāde who he shall handel or manadge his armes, and who he is to take the wourde, and to be alert, let him not be given nor muche credible to uncertayne shadowes, as many bisones and rawe men doe, giuinge many alarmes withoute ocation; And when the rounde aprocheth the cintery is to terciar his pike and demaund quī Viene alla, and if he houldeth his peace, let him turne againe in demaunding with much severitie with an angrie and furiose contenance, if he answer amigo which is to say afrende, then let him demaunde the vvatche vvourde, preparinge and makinge ready him selfe for that purpose; And if it were soe that he shoulde suspecte of the rounde that it were an enemy, though they give the vvourde let them not pass, aladginge that they have not the righte vvourde: but otherwise knowinge the rounde and givinge the vvourde he is to lett them freely pass.

The cinteries are alvvayes to by moste carefull and Vigilante, for some tymes it may happen that the enemy shoulde steale the wourde, and fall of a sodaine on the cinterie and kill him, vvherefore he is alvvayes to by alert and verievarie, and if he suspecte the rounde to be an enemy as before spoken let him be no meanes come neere to Master his armes, and specially if they replee let him cause them to retire, if not, presently he is to caule alarme vvith great furie and high voice that he may by vvell hearde, and if neede require lett him by a litle and litle retire, defendinge him selfe the beste he may beinge therunto constrayned but not otherwise, vvheresoever the Sardgent mayor shall asiste vvith his Regimente or parte thereof he shall comaunde the common table ordained for gamesteres to be putt on the principall courte de garde, and the barata of thies gamesteres he shall appointe one to oversee the same, vvhicke barata shall be to sheovve his horses. He is not to permitt to putt this table in other places nor permitt any joyinge of gamesteres oute of that appointed place, for many respectes, and specially to avoyde quareles disputes joyninges and rumores of some that are given to thies vicees, but rather in the corpe de garde as a place of respecte and vvhere each one shall not presume so muche to commit disorderes, for knowinge of the severe punishmente for suche as comit errores, and loose respecte to a place of soe greate priviledge.

THE SEAVENTE CHAP.

*Treatinge of the election and office of a Sardgente mayor,
marchinge in campaina.*

HE election of the Sardgent mayor, moſte comonlie is made by the Generall of ſuch as the Coronelles or Maſteres de campe doe name or give in relation, his office is to by a generall miniſter of a vvhole Regimēte of ſundrie Companies; And a Superintendente of all the Sardgentes of the ſame. By vvhouſe, prudence, and brave conduction the Coronell or Maſter de campe doth give him the orderes neceſſarie for the due governmente of his Regimēte, in marchinge, orderinge, and embattellinge of the ſame, and of ſuche materes hereunto a pertayninge, be vvhoſe a proved goode partes may be gathered the brave conduction, valor, and prudence, required in a perfecte Souldier, beinge choſen as a man who hathe the be fittinge partes required for this office of ſuchē greate emportāce. Whiche in time of the Greekes and Romaines vvvas truſted to none, but the Generalles executed the ſame in there one perſones for many rare reſpectes of importance. The firſte thinge that he is to doe before he begins to march, is to conſulte withe his Maſter de campe of all neceſſarie thinges for his journey, and ſee ſuch thinges beſittinge prevented, and provided in due time; advertiſinge all the Captaines of his Regimēte to put them ſelves in order to marche, vvith as litle bagadge as may be poſſible, and within ſo many dayes to have all thinges in areadines, and givenge order to the Captaine de campana to prepare him ſelfe, and his ſutleres, as alſoe to the Auditor, Furiell mayor, Surdgent mayor, Drom mayor, and that he be carefull that Dromes and Phifes by vvell provided in each Company.

The office of a Sardgent mayor is of higher degree then any ordinarie Captaine, for the Captaines doe receive the orderes from him, and followt his directiones, and the Sardgente mayor, from the Coronel, Maſter de campe, or Generall, or from the Kinge or Emperor him ſelfe if he be in the fielde, for he is barred no entrie gate nor other place but free lie ſufered to paſſe into the Kinge or Empe-

ror is chamber, for beinge a person of greate respecte and fidelitie: Wherefore theyre ought greate consideration and regarde to be taken in the election of this Officer. Which otherwise beinge chosen by favor, frindship, or affection of one of litle sufficiencie, resulteth many enconveniencs: It alsoe faileth oute often times that such persones so chosen, vwantinge the prudence, auctoritie, perfection, and brave conduction in him required, looseth often times his due respecte, and reverence of the Captaines and other Officeres: Wherefore it vv ere farr better for him to remaine a Captaine rather then intermiddell in a matter vv hich requireth suche greate capacitie and perfect experience in vv arr.

In occasiones of marchinge he is to consider the qualities and conditiones of the countrie, if fertill or scante, if hilly or plaine, and not to permit to mounte a horsebacke but as feowe as can possible; Alsoe to consider the quantitie of bagadge, and provision, youe are to carry, and that to by as litle as may be possible as before spoken, rather onelie so much as neede shall require, and that the wantes thereof can not be excused.

After that all thinges necessarie for youre marche are treated and consulteth of (and put in order) yove shall comaunde that all the Companies of youre Regimente shall joyne where voure Master de campe shall ordaine, and thincke moste fitt: Then bigen to make youre devitiones to marche as youre Superior shall comaunde. But if onelie one Regimente doe march by it selfe, the Sardgent mayor is to consulte with his Master de campe, never failenge if they marche in any place or countrie where yove shoulde chance, or feare to encounter your enemy to provide youre selfe vv ith sertaine barreles of poudre, match, and bulletes, that alwayes yove carie of thies rather more then lesse; some pikes fearinge to wante, a quantitie of shoules bills, hatchetes, which is necessarie if neede or occasion require to make a way with trees boughes, and earth, in places where vv ith difficultie the Infantry, and bagadge may pass, or to cutt tries to shutt up a pasadge of o sodaine, or to make even places when otherwise but with greate difficultie youe can pass them, thies are necessary pertrechos, for not knowinge when occasion may offer to have neede of them, and speciallie pasinge troughe a foraine countrie.

In occasiones of marchinge the Sardgente mayor is to make the devitiones, and ordaine where each Captaine shall leade, and in such maner that each Captaine shall take his turne, meaninge that the

Cap.

Captaine or Captaines that did leade this day the Muskettaria shall to morowe leade the Arcabuseros, that did followe and another day the pikes, and another day the Arcabuseros of the rergarde; and soe fall a neowe and be his turne take possession of the vangarde, and rergarde as his turne shall fall: And it is inogh to ordaine this once, and let each one unconfusedlie be his turne take place of the vangard, rergard, and battell.

Pasinge through any cittie or place where any danger mighte by suspected: In the devitiones of the shott and pikes greate industrie and consideration is to be used, youre shott are to marche in good order, and not confusedly, and be noe meanes to let none miss his rancke, givinge order to all the shott to lighte theyr matches, and to be redy of a foudaine if neede require, and otherwise where they be is nothinge suspected, one or two matches in every ranck may serve, it were not amiss to have no more bagadge then neede should require, and not to permitt the Souldieres to putt theyre musketes in vvagones as often times they doe, and in ofringe occasion to serue with them, it hapened that through this bad custome many are of no service vvith the barreles, and lokes of theyr musketes brocken, soe that in time of mooste neede they wante.

It is mooste necessarie that the Sargente mayor and Captaines be curiouse to see many fautes redressed, and that the Souldieres be well provided of all necessities, in as muche as can be by possible, and specially the shott to be well furnished with bulletes, at least twenti five, and in no case to faile in this: The Captaines and Alferises, are to goe bravelie armed with complet cossetes, and let no Captaine nor Alferis monte a horsebacke till all the devitiones of shott and pikes are well ordered, and when all the bagadge is readie, and that the Master de campe doe pass to the Vangarde.

Then havinge all thinges in order, in amile distance from the quarter the Sargente mayor shall step into the vangarde, and give order to the Captaines to goe a horsebacke and not before, as alsoe the Alferises and other particular persones, the Alferises recomendinge theyre coulours to theyre a vanderadosse, and the Captaine or Captaines that are of the vangarde shall permitt noe Souldieres to pass but such as have order in vvritinge for the same from the Generall or Master de campe generall or ordinary Master de campe, and the Captaine that goeth in the rergarde shall take a speciall care to permitt none to tarie behende, but rather cause them to stepe forward to

theyre rankes. That alsoe no boyes nor sutleres by permitted to stay behinde for some of purpose doe stay to no goode entende, but to steale robb and spoyle the poure enhabitantes goodes, vvhiche is a thinge not to by permitted: And such sutleres and other unrulie factioneres as are given to this base and odiousse acte, are to be severelie punished in publicke. Wherof speciall care oughte to be taken for many respectes.

Before youe marche the Capitaine de campana and all the sutleres and amunition vagones are all to by drawn oute of the quarter, or dayninge those that shall garde them. And then consideration is to be taken of the maner who to march with the amunition and bagadge vvhich is, that if it by knowen that the enemy is to by feared in the vangarde, on the way vvhare yove are to pass, let the bagadge by placed in the rereward, and if contratie yove have intelligence to feare the enemy in the rereward yove are to pass the bagadge to the vangarde. And if on the righte side, to conducte it to the leefte, and if on the leifte side transporte it to the righte; And in this maner the army beinge smale or greate it shall be a vvall and defence to the amunition and bagadge. And this don by alwayes provided and ordered in due time, for otherwise it vvare a greate miss if sodaine occasion shoulde represente, and that the enemy of a sodaine shoulde fall upon, and chardge on yove; Douptless it vvare a greate let and danger if yove were not provided and well ordered: To prevente the soudaine incurfiones and stratagemes of the enemy theyre oughte to by sente certaine lighte horse to scoute, and revewe before a certaine distance: soe beinge advertised before the enemy a proache, all thinges necessarie may by prevented in due time.

The Furiell mayor or Quarter-master with the reste Furielles are to marche all at once and not otherwise, for to make the quarter in due time. For if otherwise they goe they may use fraude and villany in spoylinge the Villadges and poure enhabitantes, to whome all equitie, justice, and goode examples are to be ministred, for many goode respectes. Some Souldieres of litle honor and reputation some times in theyre marche to ease them selves doe breake theyre pikes or leave the same behinde, of suche base fellowes the Sardgent mayor is to take a speciall care to see them severelie punished in publicke, excepte it be one that is sicke or hurte, of vvhich persones he is presentlie to give enteligenge to theyr Captaines, and see that order be taken to save them.

In ocaſiones of marchinge, the Sardgent mayor is to order, and make his deuſiones when he thincketh that all the Souldieres of his Regimente are gathered; and comenge to a conueniente place to frame a Squadron of them, of whate forme he thincketh beſte. And when he cometh within a mile to the quarter vwhere he is to lodge with his Regimente, he is to ſtep forward to ſee whiche is the fitteſte place to frame a battell; As alſoe to reuewe the ſallies and entries of the quarter.

The Quarter-maſter is to receive him, and ſheowe howe, and wherethe Regimente ſhall be lodged, As alſoe the fitteſte place for the embattellinge of his Regimente, and after the Squadron is framed, he is to appointe the Companies that ſhall be on the watch that night, if on the generall a munitiones, or Maſter de campe, or elſe where, let him ſee that ther by no empedimente in the place vwhere he choiſeth to be more fit for the framinge of his Squadron, Alſoe he is to be verie carefull and diligent in ordaininge the neceſſarie places for the watches, and he ſhall appointe gardes a goode diſtance from the quarter; Soe that the enemy of a ſodaine doe not fall vpon him, of which for many reſpectes greate conſideration oughte to be taken and prudently prevented.

He is to procure with the Maſter de campe to cauſe a vando or proclamation to be beaten for the obſervationes in paſſinge the wourde in march, battell, or elſe where, and ſuch as do not obſerve this vando to ſee them ſeverely puniſhed for this beinge a matter of greate emportance, and wherof greate diſorderes and inconueniencies doe reſulte often times for not obſervinge the ſame: The wourde is to be given before perſones, that is the Maſter de campe, Sardgent mayor, and from the Captaine that leadeth the Vangarde, and from him that leadeth the rergarde: And greate ſpeede oughte to be taken from whence it came and the cauſe.

For it may be that the enemy ſhoulde of a ſuddaine chance to fall on the rergarde, or that ſome other ocaſion of emportance may offer; for whiche reſpectes and many more conſiderationes this order is to be inuiolably obſerved: And let itt with greate ſpeede paſſe from rancke to rancke in youre march or order.

It is moſte neceſſarie nowe and then to make ſome altos, or ſtandes to eaſe the Souldiores, and reſreſh them with ſuche ſorte of vituales as they cary alonge with them, and ſpecially where theyre is comoditie of water, and take a ſpeciall care that ſome unruly fellows by

not permitted to goe oute of the order, and fall aspoylinge the country, neyther there boyes.

The Sardgent mayor is to oversee and informe of all thinges that paseth in his Regimente and give order to the Captaine de campaña or borachell to see that his sutleres by well provided with vituales and other necessaries therunto a pertaininge, and to take a speciall care that noe wronge by don unto them. But rather to see severelie punished suche as vvoulde presume to doe them wronge. That ther by they may vvith the amore willinge minde accomplishe theyre obligationes in furnishing them selves with vituales and other comodities, and alsoe the Sardgente mayor is to see that they be well paid for otherwise beinge ill paid and seeinge that there is no justice ministred they will run avway and give a bad reporte, soe that noe other sutleres shall dare to come, and soe provicion will be vvantinge to the greate discomoditie of the Officeres and Souldiores.

The Captaine de campaña is to use discreffion and concience in seeinge that the sutleres doe sell there vituales with suche consideration that they may gaine and not overpress the poure Souldior through coveteousnes and griddie deceite, as often times they doe. In thies and many more ocationes if the Sardgente mayor be courious and carefull in a complisinge with his obligationes, hardlie can any thinge pass vvithoute discoverie and redress in due time, for he is a principall minister to oversee redresh and remedie many faultes, disorderes and fraudes, and he is in conscience bounde to procure the goode of the poure Souldior, that noe fraude be permitted in deceivinge him of his poure meanes.

If the Sardgente mayor be in the filde with his Regimente a litle before the fallinge of the nighte he is to relive the watches soe that the enemy may not discover them cominge nor goinge: but in garrison the watche is to be sooner set. In campaña a special care ought to be takē that the enemy for cause of oure negligence litle care and prudence do not of a sodaine fall on us beinge un provided, for to prevente such suddaine ocationes it is necessarie that a corpe de garde volante be ordained a certaine distāce towardes the enemy where yove moste suspecte theyre cominge, which is a greate securitie for that quarter of the campe, but this muste be set at the fallinge of the nighte, and theyre can hardlie any fire be made that the enemy may not discover yove, they oughte to be verie readie varie and vigilante vvith there armes at hande to fall on the enemy if of a suddaine they be therunto

runto conſtrayned, and ſee if they can finde any conueniente ſhadowe to ſhelter them; And if perhapes the enemies ſpies doe knowe or diſcover vvhoo oure vvatches are ſet, and not knowinge of this vvatch ſet ſoe late and ſoe ſecrett, it may fall oute that the enemy may fall into theyre handes, for not beinge advertiſed by there ſpies of the prevention taken; And fall of a ſodaine on them, and give the alarme to the vvhole campe, ſoe that they may be ready in due time to prevente the enemy his incurſiones, and purpoſe, and at lenghte cauſe them to retire, in executinge nothinge of theyre deſigne or deſire. For this purpoſe muſte by choſen a Captaine vvho is vvell knownen to by prudente, vigilant e, and valerouſe, and of a brave and reſolute determination: And findinge the enemy brocken, let him in no caſe followe them any greate diſtance, for they may prevente him vvith a ſecrett ambuſcado, and findinge them paſſe the ambuſcado fall on them on bothe ſides, before and behinde, and defeate him: Often times it happened that ravve Souldieres and men of litle conſideration doe give a larme vvithoute any occaſione, wherfore they are to by advertiſed not to give any ſuch till they by informed, and vvell aſſured that it is the enemy, for ſuch as otherwiſe doe, they are eſtimated of litle conſideration and of a vveweake ſpiritt findinge them ſelves preſentlie a maſed, truſtinge to theyre inconfiderate imaginatiõ of noe firme grounde nor reaſon figuringe in theyre imagination to have ſcene this, and that, and of no purpoſe nor firmeries; Advertiſinge that if an a larme be given where occaſion doth preſente, it is not to paſſe all the campe in ſoundinge dromes and trumpetes, but rather verie ſecretly, and vvithoute any rumor nor voice and vvith greate ſilence, joyne, and ſpeedilie put them ſelves in order; Which orderes the Maſter de campe, Generall, or the perſon that comaundeth ſhall comaunde to be obſerved all over: Soe that all thinges by preventeth vvith better order, and vvith amore ſetled minde; and if otherwiſe the a larme be given every vvhere it is harde to knowe in due time, vvhere the occaſion is.

The centerie oughte to by verie firme, and ſeeinge one come let him not ſtirr, but rather prepare him ſelfe till he be vvell informed, and knowinge that it is an enemy then in a prochinge neere and aſſured, to ſhoote at him, and to be aſſured in as muche as may poſſible not to miſſe; And beinge a pikeman he is to let him com under the puieſh of the pike, and then give the a larme, ſheowinge him ſelfe vvith a valerouſe determination, and kill the enemy, or take him,

and to learne the designe of the enemy, and to whate purpose he was employed, and then to retire to the nexte adjoyninge cinterie, and from thence to the seconde, and soe from hande to hande till he be sente to the firste garde, and from thence presentlie to advertice the Sardgent mayor, advertisenge that everie cinterie shall remaine in his a pointed place, and to be verie varie and vigilante fearinge that others shoulde followe, and inter of a suddaine findinge convenient oportunitie for theyre purpose: A nother thinge is to be considered that some times it doth happen that a spie favorable to us doth come from the enemyes campe to give us intelligence of whate occurreth, which spies are to be received, and causinge him to stande or make al- to till the Officer of the garde by advertised, who is to receive him and presentlie carrie him to the Sardgent mayor, who shall advertice his Master de campe, and withoute delay conducte him to the Superior to inform and sheow him the cause of his cominge.

If be chance the enemy shoulde fall on the pikeman standinge in cinterie, and seeinge that they are of such force, that he can not resist, let him retire to the nexte cinterie shot that he may shoote at them, and give the alarme, and soe by litle and litell retire, and the pikeman shall with all speede goe to the firste watche and give intelligence of the occasion, that they may be readdie in time.

And this order oughte the Sardgente mayor to give that all thinges may be don in order and in due time, givinge alsoe order to the watches and culoures, where they shall oyne, and whate they shall doe; soe that withoute delay they shall be founde to be putt in order to fighte as the situation of the place and occasion shall require.

In all places on the frontier of the enemy where greate suspition may be feared of suddaine exploites and embuscados of the enemy. In such places, and occasiones, the Sardgente mayor is to give order in the morninge, that noe cinterie doe retire till all places of suspition by visited; and then the cinterie perdue shall retire a litle further in- wardes: And he is to by examined to see if he did a complish the vigilance, care, and truste referred to the expectationes of his fidelitie; And findinge his reasones and proofes goode in a complishinge his obligationes, he is wourdie of thankses, and if the contrie be founde, and he beinge founde hiden in some sure place of no danger, nor service to rewarde him a cordinge his merit with a publicke reprehension, for not a complishinge his obligation in a place of suche importance; and

and soe shall he be rewarded and imputed be all brave Souldiores which doe hire of his doinges, and pusilanimittie. When inteligen- ce is had that the enemy are readdie to fall on you, or that any suspicion or a peerance may by of the same, eaverie one oughte to be readdie with theyre armes in hande with a setled minde and brave determination, soe that with the firste alarme they may have no kinde of lett, but presentlie followe theyre leader withoute bea- tinge Drom or phife or makinge any kinde of rumor, but rather with greate scilence fall in to theyre order.

And concideringe that this is not onelie for the obligationes they owe unto theyre kinge or Prince but alsoe for the safegard honor and securitie of theyre owne persones,

For thies and suche ocationes all honorable Souldiores oughte to by well prepared and specially the shot withe theyre peeces all in areadines with as muche poudre as theyre flasks can houlde, and twentie five bulletes, soe that in offereinge ocation he shall not caule for poudre and led as some careles and covardlie fello- wes are vvonte to doe, not beinge vvell provided before hande; litle regardinge the kinges service and theyre owne reputaſion; to prevente thies, and suche faultes theyre Officeres ought all- wayes to see all thinges prevented in due time. Soe that theyre be no excuse.

And suche as woulde not accompliſh the same in preparinge all necessaries besitinge as ordained for that purpose, to see them re- prehended, and in case the souldier haſe not wherwith to buy thies and other inescusable wantes the Captaine is to helpe him therun- to, for beinge conveniente for his Majesties service, that the soul- deres alwayes be well provided and suche as do not obey thies inescu- sable wantes to give them publike afronte like, covardlie and disobe- diente fellowes; such Souldiores as are of prudēte cariadge and have a speciall care in acomplishinge with punctualitie theyre obigationes, and in givinge goode examles to otheres to imitate them, unwourdie is the Captaine and Officeres that will not honor futher and assiste thē.

For in thies ocationes we see many brave and honorable Souldio- res whiche, are wonte ordinarily to carri apice of extraordinary goo- de match in there pocketes withe the two endes of the same in area- dines, and rubbed in poudre, that without delay it may kindel fire, and alsoe with a fleaskillo in his pocket with fine and drie poudre for touch poudre, whiche if it were wett and afterwarde dried in aqua vite or in

gineper oyle or in bothe together it were verie goode, which beinge well dried, can not miss; And suche Souldieres as are knowen to be curiousse, and punctual in this and many more occasions.

Theyre Captaines and Officeres ought to have a speciall care to honor, and prefer them a cordinge to the trial of ther valor, care, punctualitie, and prudence, in givinge goode examples, and shewinge them selves in all occasions, and incounteres, vvith a brave and resolute determination, vvhicke is a vvonderfull cōforte to theyre Captaine, and puteth him in greate hope of the victorie, and goode success, unhappie is the Captaine, and unwourdie of the name that vvill not make knowen to his brave Souldieres his inclined affection towatdes them, and specially in time of moſte neede.

In ordaininge the conveniente places for the cinteries both in the fieelde and garison. The Sardgente mayor is to use greate discreſtion, in overſienge all the circuide and entries of moſte importance and danger, (and after viwenge all) he is to a pointe a conveniente place where eache cintery ſhall by placed a luenge twentie five or fortie paces betwexte every cintery, ſome times more, and ſome times leſſe, as occasion ſhall require: But in the fieelde is there to be a pointed a cinterie perdue, or rather call it the contrary (the ſecuritie of the campe) this Cintinel is to be put doble meaninge a pike and a caliver, in a diſtance of, ſom o honderth paces litle more or leſſe towatdes the enemy, and withoute all the other cinteries, in the place or places wher there is moſte ſuſpicion of the enemy to come. Some houlde an opinion, that this cinterie is not to get the wourde (not ſoe (for if they ſee or here any rumor, or a peeraunce of the enemy cominge, the pikeman ſhall repaire vvith ſpeeche and tel the nexte cintery vvhat he hath eyther ſcene or hearde, and if he have not the wourde or contraſena he ſhall not let him come neere, and this cinterie vvith ſpeeche is to let this paſſe to the nexte, and ſoe from hande to hande verie ſecret and ſcilent till it come to the nexte adioyninge vvatche or garde, that they may be prevented in time.

This cinteries of righte is to be caulled the ſecuritie, of the campe rather then centerie perdue: They are to by choſen of valerouſe and ſetled Souldieres, of goode judgemente and brave determinationes; And when the adviſe cometh vvith goode ſecuritie to the watch, that the enemy are in armes, or approchinge neere, preſentlie the Maſter de campe, and Sardgente mayor is to be advertiſed. And they are vvith ſpeeche to advertiſe the Maſter de campe generall, in findinge as before

before true relation of the occasion to by suspected of any importance. Thies outwarde cinteries are never to retire, but when urgente and assured accasion doe constrainethem therunto, in seeinge the enemy a proching, (and not before) and untill they revivwe if it be foote or horse. Or if they come in order of Squadron or marchinge in single file: After well reviwenge them, let them retire to the nexte cintery, and let the wourde pass very secretly from hande to hand til it come to the next watch, or let the pikeman goe forward with newes and the other stay vvith the firste cintinell til they be constrained to retire to the nexte, and soe retire be litle and a litle, observinge still the enemy, and with whate order they doe marche, and soe fall into theyre owne people, and informe of all of whate they have bothe seen and hearde: And seeinge them come disordered, thinckinge to fall uppon oures of a suddaine beinge a sleepe or in provided. Then oures to turne uppon them with full resolution with the short Dromes and Phises, which doubtlesse if as before they come, they shall finde them selves puffed and amased: Thies exploits require prudence, valeor, silence, and brave resolution.

It is necessarie that the Sardgent mayor give order that uppon paine of deathe none doe presume to give a false alarme vvithoute occasion, excepte it be vvith order of the Superior. And in occasions of encounteres, skirmises, or assaultes vvith the enemy let the Sardgent mayor give order that none call for powder but verie silence; for it is a thinge moste odious and of litle discretion, that the enemy shoulde knowe of oure vvantes in such occasions: If neede require the pikes and raperes vvill serve in goode steede, if the Souldiores vvith the brave resolution and determination doe accomplish theyre obligations, for vvich extremities is required a prudent and brave conductor of a valerouse and resolute determination.

In all occasions in the filde where the enemy, is to be feared and suspected, the Sardgent mayor is to give order that the outwarde cinteries of oures nexte unto the enemy doe take a speciall care that none doe pass unto the enemy from oure campe; Which is rather to be suspected then if one of the enemy came into oures, for such as run unto the enemy they may be suspected, that they goe with some advise or secrett intelligence, if such persones can not be killed or taken, let theyre warninge by presently given to his Captaine, and then presently to the Sardgent mayor who at that instant shall comaund that noe Souldier of the watches who hath the wourde shall be per-

mitted to leave the same that night wiche orderes he shall deliver the Sardgentes to deliver theyre Captaines to see the same executed ; And in such occasions the watche wourde is to by changed, and if any body by founde absente, of those of the watch let theyre warninge, presently be given to the Captaine, for it may be a villaine of a base minde, and that he did goe with some advise to the enemy, and within foure or five dayes after come into oure campe, and give false excuses, hopinge to be pardoned, and comitt more villany : In thies occasions goode heede oughte to be taken.

A verie necessarie thinge it is in a Sardgent mayor to by carefull in seeinge that all the Souldieres of his Regimente be well armed, and that there may be noe excuse in a complishinge theyre obligationes, in excusinge that theyr armes are brocken or a mindinge. All thies and many more may theyre Captaines, and Officeres prevente in time, withoute troublinge the Sardgent mayor theyrwithall, for he hath to many other employmentes of greater momente, and as if say thies may be well prevented be theyre Officeres, beinge coriouse and carefull.

When occasion shall require that the Sardgent mayor woulde have oute of certaine Companies of his Regimente a quantitie of Souldieres to be employed, this he is to demaunde of the Capitaines, who is to a pointe and ordaine the number demaunded, and not to intermidle in takinge them otherwise, for the Captaine is he which is to give a compte and reason of the Souldieres of his Company, and the Sardgent mayor in noe case is to intermidle in takinge them but those which the Captaine shall a pointe, for the Sardgent mayor hath no auctoritie to take them otherwise; Excepte they be on the watch, and that urgente occasion shoulde be offered which requireth greate speede. And in such occasions the Officer beinge not presente he may take them; and such Souldieres as the Sardgent mayor shall demaunde the Captaine is to make no acceptiones, of all such occasions as are necessarie for his Majesties service : But he is not to intermidle in takinge from any Officer any priviledge a pertaininge to the executiones of his office, which if otherwise he shoulde presume itt is a sinister and odious thinge in warr,

Some times it hapened that Pincioneres Gentlemen of the Artillerie, and other particular persones are employed be the Master decampe generall, and by the Generall of the Artillerie, and be otheres, wiche are to be permitted to pass to deliver theyr mesadge in due time,
and

and none ought to trouble or moleste them in there voyage, excepte they be suspected.

The Sardgent mayor is to take care that if his Regimēte in occasions which mighte happen they breake uppon the enemy, and followe on the victorie, let none in paine of death fall a robbinge the hurtemen, nor none of the slaughter, which if any Officer finde them in that base acte in such occasions, may execute this sentence, beinge moste base and odious, but rather persue the victorie, and keepe his order as behooverth an honorable Souldier of resolute and noble minde to doe.

In like maner in occasions to inter per force of armes into any towne citti or stronge place, the Sardgent mayor is to by verie, vigilante, and carefull, that noe Souldier of whatsoever qualitie or condition: be permitted to inter into any house, eyther to robb or steale till such time as the enemy be wholie vanquised, that no danger nor execution of theyres might be feared, and that till all there furie be paste, and that uppon paine of death, for otherwise they incur greate danger, some leavinge theyre armes hire and theyre in divers places; of vvhich if the enemy take pocation they may easilie Master them; Of suche blinde ignorance and covetouse desire of gaine, greate disgrace may resulte. If the enemy doe secretlie joyne in some secret place, and fall unavare in masteringe theyre armes and murder them, which may well fall oute if prevencion be not used as before declared, in suche sorte that the enemy may not come in possession of the honeor gained vvith the lives and losse of soe many brave Souldiores.

For the executiones of rare exploites and brave interprises in warr is required prudente and brave conduction, and specially that the Sardgent mayor be moste earneste to exercise the Officeres and Souldiores of his Regimente; whiche beinge soe practised in warr, greate expectationes mighte be hoped of them: Beinge exercised in well manadgeinge theyre armes, observinge theyr order and not stiringe oute of the same when they marche, in knowinge who to fall into squadron, and observe the proclamations given, and ordained be the Generall, nothinge soe difcill but that contuall use and exercise maketh easie.

Who soever woulde faine be courious in the framinge of many sortes of batteles, it is necessarie that he be exercised both in the theoricke and pratike of this arte, and specially to be able in Aritmetick: Soe shall

shall he in time bringe his purpose to perfection with greate ease. And let him be carefull in knowinge who to give the orderes to each Officer of whate shall becomended to his chardge, and cause all thingss to be accomplished as they were ordained withoute replie, he shall not recall any order given, excepte it be trough goode consideration, neyther shall none be discomodated to put a nother in his place by favor or affection: Greate consideration oughte to be taken in choysinge one of besitinge partes for the well executinge of this office, and that be no meanes it be given be favor or affection for many considerations of emportance. After those of perfection in this arte we loocke dayly and finde feowe, but those of imperfection in multitude.

Some houlde an opinion that in orderes of marchinge and framinge of Squadrones the number par, is beste, true it is that this number is good, but in the divitiones to fall oute of youvre march into Squadron, let none be ingnorante that they are to marche acordinge as the devition fauleth oute. And for beinge of number par or impar it importeth nothinge, and for the contrariethere is no rule, buth rather conforme vwith the divitiones as they shall fall oute, (which is the true way) for we finde no other reason to the contrarie, neyther had *pirho*. Kinge of the Epirotes the firste inventer of Squadrons, neyther the Romaines, Greeckes, nor Macedonios nor any other nation:

A Sardgent mayor ought not to by ingnorante in framinge and givinge reasones of all sortes of Squadrones, at leaste all suche as ocatiō and situation shall require, of which the Sardgent mayor oughte to be curiouse, and not to err in any thinge that belongeth to his office, and specially in the devitiones and framinge of sundrie sortes of Squadrones, though many do imagine and suppose it needlesse (more then onelie the foure formes.) They are far deceived, for occasiones and situationes shall offer where neyther of the foure formes will serve: In framinge of batteles the Sardgent mayor is to sheowe him selfe with a letled prudent and brave resolution, and by no meanes permitt any crosinge or confusion in the orderes be him apointed, nor wronge none to take him oute of his rancke for him that came late, soe hittinge uppō the iuste devitiones of his shot and pikes, he shal place an Officer or two as he thincketh beste in the head of each devitiō, and that the Sardgentes doe accomplish theyre obligationes in letinge none to stragel, nor fall oute of theyre ranckes; Soe the Sardgent mayor shall
with

with ease and brevitie frame his squadron, and without any crossinge or confusion beinge so conveniente.

For each Companie of pikes shall take theyre turne on the watch and soe needeth no contraverſie nor confusion. The Maſter de campe as a Superior of his Regimente is to choiſe to march where he pleaſeth, and if ther by two Companies of Adcabaſes the one is to march in the vangarde, and the other in the rergarde, it is enough that the Sardgente mayor giveth once chies odderes that each one be his turne shall come do optaine his right in occasions of marching, withoute troublinge him any more. But if theyre be more then one Regimente each of them shall take theyre turne accordinge as they have the vwatche, marchinge firſt uppon the righte hande, and soe goe by turne, and shall alsoe be lodged firſt, and the reſte of the Companies withoute any crossinge or confusion as they come, yea if it were to frame a battell of the whole exercito.

Many goode partes are required in a Sardgent mayor and principally to be experte in well executinge his office, to obſerve goode order in march, to prudently finiſh with expedition his affaires, to reprehende and redreſſe diſorderes in due time, with prudence and auctoritie, ſoe shall he be beloved and reſpected, and moſt commonly have goode ſucceſſes. In the greateſt dangers he is to ſhewe him ſelfe with a ſteddy minde and brave couradge, animatinge the ſouldiours, ſheowinge him ſelfe with them in all dangers and extremities, comfortinge, and givinge them goode inſtrudiones and examples, and in the greateſt dangers that shall happen to preſent him ſelfe with them with a brave and valerouſe determination, ſoe doubtles shall he by beloved, feared, and reſpected by all. Let him by no meanes be overcome by diſordered appetites but rather be moderate mylder, and faire conditioned, as beſtinge a perſon of ſoe greate comaunde.

Treatinge of ſeverall ſortes of Squadrones.

Beginninge with the rule who to finde oute the ſquare roote of any number, the table pitagorique, a table to by put in memorie for the framinge of ſquadrones, for ſuch as are poſſible expreſſed in Arithmetick, the table of the proportionies of ſeverall numbers, and who to frame ſeverall ſortes of ſquadrones, of ſeverall ſortes of weapones, and the industrie uſed for theyre due orderinge and devidinge.

vidinge in propotion, acordinge as time, occasion, and situation shall require and permitt.

A square roote is a digit or number whiche beinge multiplied in it self bringeth the fourth a square number, as 2 beinge multiplied in it self maketh 4. in sayinge two times two maketh 4. and so from the number 1. to the number 9. yove shall understande in the table Pitagorique; the raies of 1. can not be but, 1. the rayes of 4. is 2. the raies of 9. is 3. the raies of 16. is 4. that of 25. is 5. and soe consequently as in the table folowinge yove may perceive.

To finde oute the square roote of any number be it square or not square, yove muste worke thus, firste havinge set downe the number propounded whiche at the leaste muste consist of 3. figures. Set a prick under the firste digit of the saied number on the righte hande, that don prick every other digit or number therof towardes the leifte hande; Havinge alwayes one voyde space or chifer betwext every 2. priekes, as yove see heere don in the number folowinge 946. to finde oute the square roote of this propounded number, yove are to prick the saied number as before taughte, havinge so don seeke oute one of the 3. digits, whiche beinge multiplied in it self may take a way the chifer 9. that is on the lefte hande, or as muche therof as may by, in sayinge 3. times 3. maketh 9. soe that 3. is the rays of 9. the firste chifer of youre propounded number, and resteth nothinge, whiche yove shall put right above the 9. soe that yove have wholly don withe the 9. that lieth on the lefte hande, that don, double the quotient whiche is 3. and it maketh 6. and set the same in the voide place right under the figure 4. and seeke oute a digit or number, whiche beinge multiplied in it self may take a way the 4. and say how many times 6. can yove finde in 4. nullo; soe set downe 0. in the quotient right under the 6. that standeth on the righte hande, and say that in plasinge nullo in the quotient yove have don and there resteth 46. that remaineth, soe say that 30. is the square roote of 946. and there remaineth 46. that is not comprehended in the square roote in sayinge multiply 30. the square roote of 946. by 30. and it will make 900. to which 900. ad 46. that remaineth, and itt shall amounte the full some of youre propounded number of 946. as by the proove yove plainly see. In all suche numbers to

knowe

knowe whether yove have dō well or no, multipli the square roote by it self, to the producte of which multiplication yove are to ad if there by any remainder, and if yove finde the summe therof to be like to youre firste propounded number, yove have don well, and if it be not like yove have errede.

But if suche number doe consiste of many numberes or figures in workēge wherof yove muste double the quotiēt once, twice, or thrice, acordinge as the number dothe require, whiche yove shall more plainly perceive by this example followinge: Presupose that 37424 is the number wherof yove woulde knowe the square roote; to doe the whiche wourke as before taughte, firste prick the 4. that standethe on the righte hande, then fall to prick the other 4. towards to lefte hande, and havinge so don prick the digit 3. that standethe on the lefte hande of all, nowe seeke oute som digit or number, whiche beinge multiplied in it self, takethe a way the laste chifer on the lefte hande, whiche is 3. or the moste therof that can be, whiche yove shall finde to by 1. and havinge set downe the saied 1. in the quotiēt say one time one is 1. whiche beinge substracted oute of 3. restethe 2. whiche is to be placed right over the 3. and conzeale the saied 3. that don, double the quotient 1. and it makethe 2. whiche yove are to place righte under the 7 of youre propounded number in the seconde place towards the lefte hande, that don say who many times 2 in 27. yove shall finde it to be 9. in sayinge 9 times 2. is 18. oute of 27. restethe 9. whiche yove shall place righte over, and above the 7. in the seconde place on the lefte hande, and in the quotient right under the pricke of the chifer 4 in the 3 place towards the lefte hande yove shall place 9. havinge soe don, say 9. times 9. is 81. beinge substracted oute of 94. restethe 13. nowe double the 18 in the quotient, and it will be 38. whiche yove shall place under the 9. in the quotient towards the righte hande, havinge soe don say how many times 38. in 132. that standethe right above it, yove shall finde it to be 3. whiche yove shall place in the quotient under the firste prike on the right hande under the chifer 4. that don say 3. times 3. maketh 9. oute of 13. resteth 4. then say 3. times 8. makethe 24. oute of 42. restethe 18. that don fall to the 3. in the quotiēt and multiply it in it self and it makethe 9. whiche yove shall substracte oute of the producte of youre laste division whiche was 184. and there shall remaine 175. soe that 193 is the square roote

$$\begin{array}{r}
 (1 \\
 \times 4(7 \\
 \times 939(5 \\
 \hline
 37424 \\
 193 \\
 \hline
 \times 38 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 193 \\
 \hline
 193 \\
 \hline
 579 \\
 17375 \\
 1937 \\
 \hline
 37424 \\
 \hline
 \end{array}$$

of the firste number given whiche was 37424 whiche square beinge multiplied in it self is 37249, and the remainder is 175, whiche two partitiones beinge putt together makethe the firste number of 37424. yove are alsoe to understande that if yove finde any number oute of whiche youre quotiēt beinge doubled and can not be substra-cted, yove muste set downe a chifer in the quotiēt as yove do in divisiō.

Moste necessary it is for a Sardgent mayor, or who soever doth pretende to be curiouse in the profession of armes, that he be expert in Arithmetike, and in knowinge who to finde oute the square roote of any number, that he may with the more facility order devide, and ranke his Souldieres, eyther of greate or smale numberes; yea and of whate soever forme a Sardgent mayor, oughte not to be ignorante, for some times occasion and situation offerethe that neyther of the 4. formes of squadrones are to be used; Wherfore i will set downe the rules, firste for the framinge of the foure formes of squadrones moste accustomed and moste in use, as alsoe the rules to frame squadrones accordinge to the situation and disposition of the place, and occasiones to fighte, as well of equalities as of inequalities. The 4. formes of squadrones moste accustomed and moste in use, is the square of men, the square of grounde, bastarde square, and broade square, whiche the Spaniarde caule quadra de gente, quadra de tereno, prolongado, y gran frente.

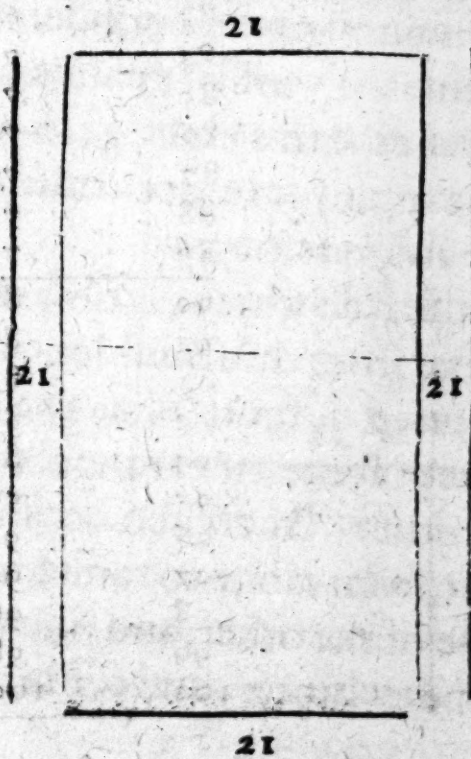
Gentell Reader, understandethat the firste thinge to by understoode in framinge of squadrones, is that the principall boddies of the are to be framed of pikes, to the whiche are required a certaine quantity of shot, which are to be devided as time situation and occasion shall require, touchinge whiche divisiones greate consideration and industry is required in many occurantes of warlike affaires, and it is of greate importance for who so ever takethe this chardge in hande to be perfecte in Arithmetike to facilitate many rare occurantes of this arte, and specially in the office of a Sardgent mayoyr.

It is to be understoode that the rule whiche is observed in setinge in order or array Souldieres, is that from the shoulder of the one to the shoulder of the other, is required 3. foote or at the moste three and hault, and from ranke to ranke 7. foote, meaninge from the breste of the one to the backe of the other. But when occasion shall offer to fighte 3. foote or 3½. is i noghe from ranke to ranke meaninge frō the breste of the owne to the backe of the other, and one for his one statio, soe that he ocupies before and behinde, and for his person 7. foote.

To

To forme a Squadron square of men , yove shall wourke , as before taughte in findinge oute the square roote which shall serve for fronte and flanke, as by the example folowinge yove shall more plainly understande, Suppose that yove are to frame a Squadron square of men of 464. pikes, to finde oute the square roote of this nūber firste pricke the laste chifer 4. towards the righte hande, that don, pricke the other 4. towards the lefte hande, so that the figure 6. standethe in the midel, nowe fall to the 4. that standethe on the lefte hande, and say the raise of 4. is 2. in sayinge two times two makethe 4. whiche 4 yove are to substracte oute of the 4. that standethe on the lefte hande then canzeale the 4. and plase a zero a bove it, nowe fall to 2. that is in the quotient, and say two times two makethe 4. whiche yove shall place right under the 6. whiche liethe in the mideste of the number given, and say how many times 4 in 6. whiche can be but one, in sayinge 4. times 1. makethe 4. oute of 6. restethe but 2. which 2. yove shall place a bove the 6. and cāzeale the 6. that don fall to 1. that liethe in the quotient under the chifer 4. on the righte hande, and say one time one is 1. oute of 4 that layethe on the righte hande there shall reste 3. whiche shall be plased righte over the 4. towards the righte hāde, then canzeale the 4. and there shall remaine 23. soe that 21. is youre fronte and flanke, and 23. remaininge whiche shall serve to guarnish the coulours, to seif yove have don well, multiply 21. the square roote in it self, and the producte will be by 441. to whiche producte ad 23. pikes, that did remaine, and the som therof wilbe like unto the firste number given which was 464. as by the figure folowinge yove may see.

A battel square of men of 464. pikes whose fronte and flanke is 21.



$$\begin{array}{r}
 6 \overline{) 23} \\
 \underline{* 6 *} \\
 21 \\
 \underline{*} \\
 21 \\
 21 \\
 \underline{*} \\
 21 \\
 423 \\
 \underline{2} \\
 464
 \end{array}$$

MILITARY

Square roots.

1	1
2	4
3	9
4	16
5	25
6	36
7	49
8	64
9	81
<hr/>	
10	100
11	121
12	144
13	169
14	196
15	225
16	256
17	289
18	324
19	361
<hr/>	
20	400
21	441
22	484
23	529
24	576
25	625
26	676
27	729
28	784
29	841
<hr/>	
30	900
31	961
32	1024
33	1089
34	1156
35	1225
36	1296
37	1369
38	1444
39	1521
<hr/>	
40	1600
41	1681
42	1764
43	1849
44	1936
45	2025
46	2116
47	2209
48	2304
49	2401

50	2500
51	2601
52	2704
53	2809
54	2916
55	3025
56	3136
57	3249
58	3364
59	3481
<hr/>	
60	3600
61	3721
62	3844
63	3969
64	4096
65	4225
66	4356
67	4489
68	4624
69	4761
<hr/>	
70	4900
71	5041
72	5184
73	5329
74	5476
75	5625
76	5776
77	5929
78	6084
79	6241
<hr/>	
80	6400
81	6561
82	6724
83	6889
84	7056
85	7225
86	7396
87	7569
88	7744
89	7921
<hr/>	
90	8100
91	8281
92	8464
93	8649
94	8836
95	9025
96	9216
97	9409
98	9604
99	9801
100	10000

For

Suppose that you are to frame a Squadron square of men of 361. Souldiers of the whiche 144. are pikes and 217. are musketes and that you would have the Squadron proportionally lined, every way with the shott. To worke the whiche firste take the square roote of the 144. pikes whiche you shall finde to be 12. and say that 12. is the fronte and flanke of the Squadron of pikes, that don take the whole number of shott and pikes whiche is 361. oute of the whiche alsoe take the square roote, whiche you shall finde to be 19. oute of this 19 subtracte 12. the square roote of the pikes, and there shall remaine 7. and so you finde the number that you demaunde for the girdlinge shott, nowe devide the 7. into two partes and say that you finde 4. in one parte and 3. in the other, and say that by youre devision you finde that the firste maniple of musketes is to marche with the 12. rankes of 4. musketes in each rank, whiche is for the linenge shot of the right flanke of youre Squadron. That don say that also by, youre laste devision you finde 12. rankes of 3. musketes in each rank to guarinshe the liefte flanke of youre Squadron, and say that the two flankes of youre Squadron are lined, with the shott, meaninge 4. in each rank of the linenge of the right flanke, and 3. in each rank of the linenge of the liefte flanke, for the two flankes are lined.

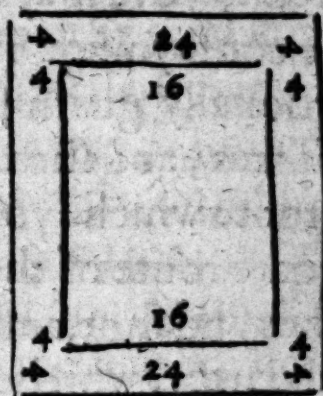
That don, say that 12. the fronte of youre pikes adinge therunto 7. musketes of the linenges of the two flankes makethe 19 and say that in youre laste devision you finde that 19. rankes of 4. musketes in each rank are to marche for the linenge shott of the vangarde, and alsoe 19. rankes of 3. musketes are to marche in the laste devision of shott for the linenge of the rergarde of youre battell, as by the figure before and in the devisiones of the same you see plainly declared, and so youre Squadron of pikes is proportionally lined every way in as much as the devision and number can affourde.

144 Pikes
217 Musk.
361 Musk.
19 Musk.
12 Musk.

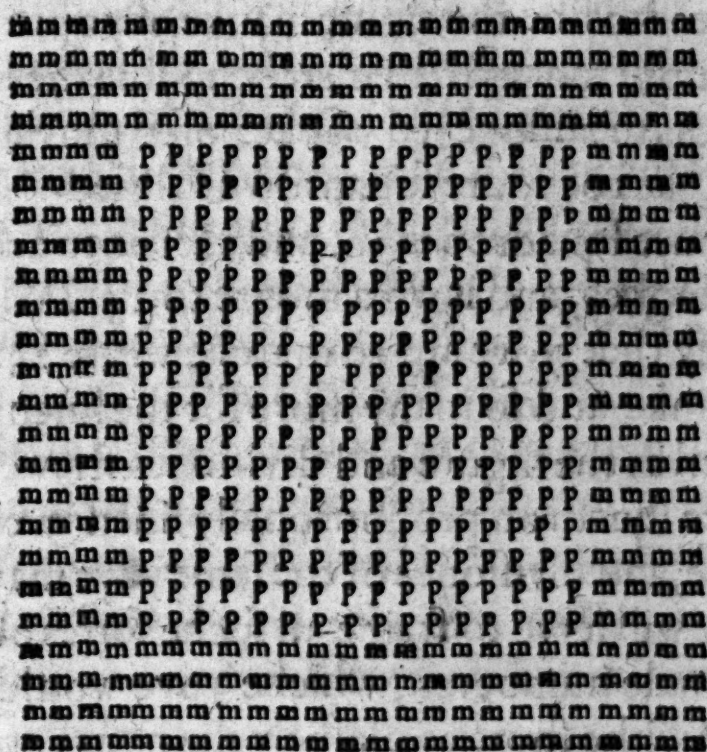
123

A Squa-

A Squadron square of men of 576. Souldiers of the whiche 256. are pikes,
and 320. musketes devided proportionally as by the figure
folowinge yove see.



Fronte of the Battel.



256 Pikes.

64 Musq.

64 Musq.

96 Musq.

96 Musq.

576.

256 Pikes.

320 Musk.

576

576

256

16

2

16

16

96

16

256

256

256

24

4

24

24

96

48

576

24

16

18

44

16

4

64

24

4

96.

24

4.

96.

For the framinge of all suche squadrones eyther of greate or smale
numbes, whiche yove woulde have to be proportionally lined withe
shott yove shall wourke in this maner folowinge: Firste take the num-
ber

ber of pikes whiche is 256. oute of the whiche take the square roote, whiche is 16. and say that so many pikes shall the fronte and flanke of youre battell containe, and that it is of equall strenghte every way as well, to offende as to defende, and when yove woulde drawe them into squadron, for the more breuity yove may devide the fronte thereof into two maniples each one contayninge 16. rankes of 8. pikes in each ranke, nowe to proportionally guarnish the same withe the shot take youre full number of pikes, and shot whiche is 576. oute of whiche nūber take the square roote whiche yove shall finde to be 24. that don, substraete 16. the square roote of the pikes oute of 24. the square of the full number of pikes and shot, and there shall remaine 8. this digit devide into two equal partes, whiche is foure in each parte, and say that the squadron of pikes is to be lined every way withe 4. shott as by the devision of the same yove see, meaninge that youre firste division of shott is to marche withe 16. rankes of 4. musketes in each ranke, whiche is to line the righte flanke of youre squadron of pikes, and so many more rankes shall marche to line the lefte flanke of the squadron of pikes, meaninge 16. rankes of 4. musketes in every ranke, so the two flankes of youre squadron are lined. That don say that the fronte of youre squadron is 16. and therunto ad 8 the linenge shott of the two flankes, and it wil amounte to 24. To line the fronte of youre battell, say that yove are to marche withe 24. rankes of 4. musketes in each ranke, and so many more for the linenge of the rerwarde of youre battell as the figure and divisiones shewethe, and soe shall yove finde youre squadron proportionally lined every way; whiche by the rule forme, and divisiones of the same yove may plainly understande. This rule will serve to frame all suche sortes of squadrones eyther of greate or smale numberes, whiche yove woulde have to be proportionally lined withe shott, as plainly the figure and divisiones before shewethe.

In many countries hardly can youe finde the one haulf of there pikes armed withe complett corseletes, soe that this rule will shewe yove how to guarnish the unarmed pikes, withe the complett corseletes proportionally every way, advertisinge that the coulours is to marche in the center.

A cross battell of 1416. Souldieres of the whiche 512. are pikes, and 904. musketes, whiche are to be divided into 4 batteles, and lined proportionally on the two flankes, as by the figure and divisiones followinge are reasoned.

DISCIPLINE.

75

To worke the whiche, firste take the number of pikes, for eache Squadron of the 4. required for youre cross battell. Nowe to youre purpose take the square roote of 128. pikes of youre firste Squadron, whiche will be 11. and 7. pikes remaininge, and say that 11. pikes is the fronte and flanke of youre firste battell of pikes, as alsoe of the other 3. batteles, and 7. pikes remaininge in eache battell, whiche shall serve to guarinsh the culoures; soe that 11. is the fronte and flanke of eache one of youre 4. batteles of pikes, and 7. pikes remayninge for the linenge of the culoures of eache battell of the 4.

Nowe for the division of youre propounded number of shott. Double the one flanke of eache one of the 4. batteles of pikes, whiche double will be 88. this 88. the double flanke of the 4. batteles of pikes divide by 904. youre propounded number of musketes, and the number in the quotient will be 10. and 24 musketes remayninge, and say that the two flankes of eache of youre 4. batteles of pikes are to be lined with 11. rankes of ten musketes in eache ranke as by the figure, and deutiones folowenge yove may playnely see, and with the observation of this rule with any other number eyther greate or smale yove shall with facility knowe how to proportionably divide yovre shott for to guarinsh the two flankes of yovre Squadron of pikes.

Thiese cross batteles are esteemed to be wonderfull stronge consideringe well the framinge therof. It is also of wonderfull safegarde, for the security of the bagadge amuniones and hurte men, and if the enemy shoulde chance to charge the firste battell, or any of the other 3. whiche beinge a lone are but of litle force. Wherefore consideration oughte to be taken of the stratagemes of the enemy, and with what order they do marche, and then yove may double or tribele yovre fronte acordinge as occasion shall require and the situation shall permitt. And if the enemy are stronge on horse, regarde oughte to be taken in due time of the bagadge that it goe deposito, or be twexte the two laste batteles, and for theyr better security in suche ocationes, I woulde cut two rankes of eache of the two laste batteles and therwi-

12 Pikes.
904 Musk.

1416.

128

007

11

11

11

11

11

117

128.

11

11

22

4

88

12

904

11

88

10

880

24

904.

and for the linenge shott 422. musketes. Of the whiche number the campe master general, woulde have a squadron square of men to be framed, puttenge the unarmed pikes in the center, proportionally lined every way with the armed corseletes, and the armed pikes proportionally lined with the gilted corseletes and officeres reformed, as also that the 4. sides of the full battell of pikes to be proportionally guarinshed with the 422. musketes.

To wourke the whiche firste take 260. whiche is the unarmed pikes oute of whiche take the square roote whiche is 16 and. 4. pikes remayninge, and say that 16 pikes is the fronte and flanke of yovre center of unarmed pikes. That don take the full number of unarmed and armed pikes whiche is 576. oute of whiche also take the square roote which will be 24. nowe deducte of this 24. 16 the raise or square roote of the unarmed pikes, and there shall remaine 8. this 8. devide into two partes, and it is 4. in eache parte, and say that 16. rankes of 4. corseletes in eche ranke is to guarinsh the right flanke of yovre center of unarmed pikes, and so many more for the guarinshion of the leifte flanke of the center of the unarmed pikes.

Nowe to proportionally line the fronte of the center say that to 16 the fronte of the center is to be aded 8 of the 2. lininges whiche makethe 24. so say that the fronte is to be guarinshed with 24. rankes of 4. armed pikes in eache ranke, and so is the fronte of yovre center and unarmed pikes lined, and the rerwarde is to be guarinshed with the self same order, imeane 24. rankes of armed pikes of 4. pikes in eache ranke, so the center of the unarmed pikes is proportionally lined every way with the complet corseletes.

Nowe to line the armed pikes with the 114. gilted corseletes take the full number of pikes as well armed as unarmed whiche is 690. oute of whiche take the square roote whiche is 26. oute of this 26. the laste rays deducte 24. the square roote of yovre armed and unarmed pikes and there shall reste 2. this 2. devide into two partes whiche will be one, and say that the righte flanke of the armed pikes are to be guarinshed with the onely 24. gilted pikes which iuste ocupies place of one in eache ranke of the flake and iuste so many more for to guarinsh the leifte flake of the armed pikes, and say that the two flanks are guarinshed: Nowe youre fronte is 26. and iuste so many gilted pikes are to guarinsh the outewarde side of the armed corseletes, and iuste so many

$$\begin{array}{r}
 260 \text{ Pik.} \\
 316 \text{ Cor.} \\
 114 \text{ Cor.} \\
 \hline
 1 \\
 254 \\
 690 \\
 \hline
 26 \\
 \hline
 4
 \end{array}$$

for the linenge of the rerwarde so youre Squadron is proportionally guarinshed every way, imeane the center withe the armed pikes, and the armed pikes withe the gilted corseletes.

Nowe to deuide youre 422. musketes, youe are to take the square roote of the propounded and full number of pikes and shott whiche is 1112. whiche square roote will. be 33. oute of this square deducte 26. the square toote that was of the full number of pikes and there shall remaine 7. this 7. deuide into two partes, the one will be 4. and the other 3. and say that by youre devition youe finde that the right flanke of youre Squadron of pikes is to belined, withe 26. rankes of 4. musketes in eache ranke, (that don) say that for the linenge shot of the leifte flanke youre devition yealdethe 26. rankes of 3. musketes in eache ranke so are youre two flankes of the Squadron of pikes lined withe the shott, nowe withe the two linenges of shott youe finde the fronte to conteyne 33. and say that 33. rankes of 4. musketes is to line the full fronte of the battell of pikes and 33. rankes of 3. musketes in eache ranke is to guarinish the full fronte of the rerwarde, for by the rule of divition and proportion it can not be other wise, so youre unarmed pikes are in the center, proportionally lined withe the corseletes, and the corseletes withe the gilted armor, and the Squadron of pikes proportionally lined every way withe the 422. musketes as youe shall see by the figure and devisiões folowinge, advertisinge that in youre devisiões there do remaine 4. unarmed pikes and 14. of the gilted corseletes and five musketes as in the devisiões folowinge youe may see, all whiche are comprehended in the 23. the remainder of youre laste devision, as here folowth declared.

A Squa.

Consideringe that many are ingnorante in knowinge the proportion of many sortes of squadrones and unequall numberes i taughte necessary to put hire the tabel and rules for the same as hire foloweth.

I Woulde wishe allsuche as do pretende to step forward in the noble profeshion of armes, troughe there prudēt cariage, and goode applicationes, to consider that many goode partes are required in them, amongste the which we finde it moſte necessary that he be expert in aritmeticke, for otherwise hardly can he bringe unto perfection the rare curiosities required to the severall executions of the arte of warr. And especially the sundry devisiōes of the severall sortes of squadrones, which by dayly triall, and experience, we see that many who are not curiouse nor expert in aritmeticke do err in uerie many ocaſiones, and can not compass, nor bringe to iuste perfection with the grace, many rare occurantes in warrlike affaires; and that for the moſte parte resultinge of there litle aplicatiōes in imitatenge the vertouse prudent and approoved souldier; and also troughe the blynde consideration of som, who consideringe that nowe in oure latter warres for the moſte parte all electiones goes by favor frindship or affection: yea and uery many by meanes of enteres, so that very many do not take the paines in aplyinge them selves in learninge the severall rare curiosities of this arte but rather mocke, and floute at those of rare and curiouse iudgementes by cause that their skill and capacite can not reache in resolvinge the rare and deepe secretes of this arte, after those of perfection in this arte we looke, for those of imperfection we finde on every foote: so none oughte to reprehende in absence wherof in presence he is ingnorante.

Proportiones of inequalities is that the battell may be more broad then longe or more in fronte then in flanke.

T Hiese proportiones of inequalities is as 2. to 1. that is to say the battell to be two tymes more broad then longe, or more in fronte then in flanke, as is one to thre or 1. to 4. ett. or the battell to be three times or 4. tymes more broad then longe, or more in fronte then in flanke, or to be $2\frac{1}{2}$. or $3\frac{1}{2}$. more broad then longe or any other suche like proportiones, to whiche effect i put this table and the rules thereunte apertaininge.

is as

$1\frac{1}{2}$ is as — 2 to 3	$3\frac{1}{2}$ is as — 2 to 7	$5\frac{1}{2}$ is as — 2 to 11
$1\frac{2}{3}$ — 3 — 5	$3\frac{2}{3}$ — 3 — 10	$5\frac{2}{3}$ — 3 — 16
$1\frac{3}{4}$ — 4 — 6	$3\frac{3}{4}$ — 4 — 13	$5\frac{3}{4}$ — 4 — 21
$1\frac{4}{5}$ — 5 — 7	$3\frac{4}{5}$ — 5 — 16	$5\frac{4}{5}$ — 5 — 26
$1\frac{5}{6}$ — 6 — 8	$3\frac{5}{6}$ — 6 — 20	$5\frac{5}{6}$ — 6 — 31
$1\frac{6}{7}$ — 7 — 9	$3\frac{6}{7}$ — 7 — 22	$5\frac{6}{7}$ — 7 — 36
$1\frac{7}{8}$ — 8 — 10	$3\frac{7}{8}$ — 8 — 25	$5\frac{7}{8}$ — 8 — 37
$1\frac{8}{9}$ — 9 — 11	$3\frac{8}{9}$ — 9 — 29	$5\frac{8}{9}$ — 9 — 41
	$3\frac{9}{10}$ — 9 — 30	$5\frac{9}{10}$ — 9 — 46

$2\frac{1}{2}$ — 3 — 08	$4\frac{1}{2}$ — 2 — 09	$6\frac{1}{2}$ — 2 — 13
$2\frac{2}{3}$ — 4 — 11	$4\frac{2}{3}$ — 3 — 13	$6\frac{2}{3}$ — 3 — 19
$2\frac{3}{4}$ — 4 — 05	$4\frac{3}{4}$ — 4 — 17	$6\frac{3}{4}$ — 4 — 25
$2\frac{4}{5}$ — 8 — 17	$4\frac{4}{5}$ — 5 — 21	$6\frac{4}{5}$ — 5 — 31
$2\frac{5}{6}$ — 3 — 7	$4\frac{5}{6}$ — 6 — 25	$6\frac{5}{6}$ — 6 — 37
$2\frac{6}{7}$ — 4 — 10	$4\frac{6}{7}$ — 7 — 29	$6\frac{6}{7}$ — 7 — 43
$2\frac{7}{8}$ — 7 — 15	$4\frac{7}{8}$ — 8 — 33	$6\frac{7}{8}$ — 7 — 44
$2\frac{8}{9}$ — 6 — 14	$4\frac{8}{9}$ — 9 — 37	$6\frac{8}{9}$ — 8 — 49
$2\frac{9}{10}$ — 7 — 17	$4\frac{9}{10}$ — 9 — 38	$6\frac{9}{10}$ — 9 — 55

To reduce theese fractiones into whole numberes, and to knowe theyr proportion youe are to wourke in this maner folowinge. Firſte multiply the whole number by the fractiones denominator, and ad therunto the numerator of the ſaied fraction, and the proportion is founde; as for example to have the battell to containe ſo muche and the one hault more in front then in flanke whiche the Spaniard call tanto i medio; ſeeke in the table $1\frac{1}{2}$ wher of the whole number is. 1. and the fraction is $\frac{1}{2}$ nowe multiply the whole number 1. by the fraction is Denominator 2. and it makethe 2. wherunto youe ſhallad the ſaied fractiones numerator which is 1. whiche two adifiones dothe amount 3. and the fractiones denominator is 2. ſo ſay it is in proportiō as is 2. to 3. and ſo muſte yove wourke withe all ſuche numberes to knowe the proportion therof, or ſay that youe will have the battell to be $3\frac{3}{4}$. more in fronte then in flanke, and to finde the proportion ſay it is as 3. to 10. as in the table yove ſhall ſee, and that yove may better underſtand it wourke as before taughte, firſte in multiplieng the vvhole number 3. by 3. the fractiones denominator and it vvill be 9. to this 9. ad 1. vvliche is the fractiones numerator and it vvill be 10 and ſay that it is in proportion as 3. to 10. and vvithe this

this observation and rule youe shall knowe in vwhat proportion shall by anny number.

To frame a Battell of 819. Souldieres, whiche shall containe so muche and the one hault more in fronte then in flanke, whiche the Spaniarde and Italian call de tanto y medio.

507	Pikes.
312	Musk.
819	

THe advantadge of grounde goode order, and Military discipli-
ne are suche that troughe the conduction of prudente and bra-
ve Comaunders smale numberes offten times repulse fargrea-
ter numberes, and some times the situatiō and disposition of ground-
so faulethe oute, that neyther of the 4. formes of Squadrones can ser-
ve; Wherefore a Sardgent mayor, or whosoever undertakethe to by cu-
rious or perfect in this arte, ought to be expert in framinge all sortes
of batteles, as well of equall and inequall numberes whatesoever,
wherfore i thought fitt to set downe the rules for the framinge of suche
batteles.

Bigininge with a battell of so muche and one hault more in front
then in flanke, which the Italian calle tanto y metcho; which i suppose
to by framed of 507. armed pikes, and that the fronte therof
containe so muche and the one hault more in front
then in the flanke, to wourke the which put downe the
number propounded whiche is 507. pikes, unto which
number ad the one hault of the self number, whiche
will be 253½. that don, ad bothe numberes and it will a
monthe to 760½. oute of whiche take the square roote,
which will by 27. and 21. remaininge, and say that 27.
is the front of the battell.

507	
253½	½
(3	
37(1	
760½	½
2 7 front.	

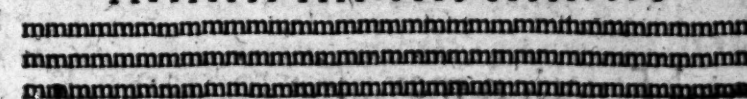
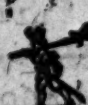
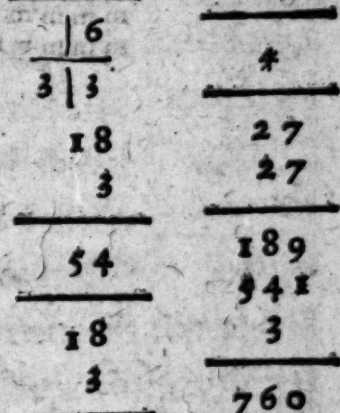
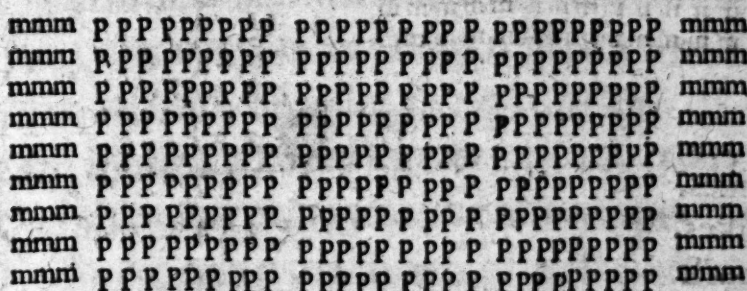
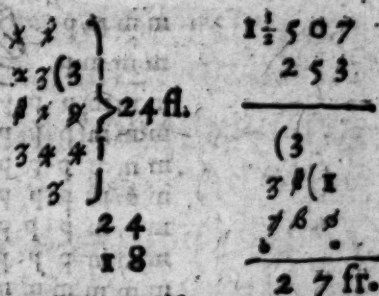
To finde oute the flanke take 507. the number of
pikes, and divide it by 27. the front, the quotient ther-
of wilbe 18. and 21. pikes remaininge, and say that 18. is
the flanke; and the 21. pikes which did remaine oute of
youre laste division will serve to guarnishe the culoures, soe that 27.
is the front, and 18. the flanke, whiche comethe to the iuste propor-
tion of the forme and number propounded, to see if yove have don,
well multiply 27. the front by 18. the flanke the product of which
mul-

(2	
27(1
33(1	
760½	18 flank.
277	
2	

83

$$\begin{array}{r} 27 \\ 18 \\ \hline 216 \\ 271 \\ 2 \\ \hline \hline 507. \end{array}$$

12 — 507 Pikes
312 Musk.
819.

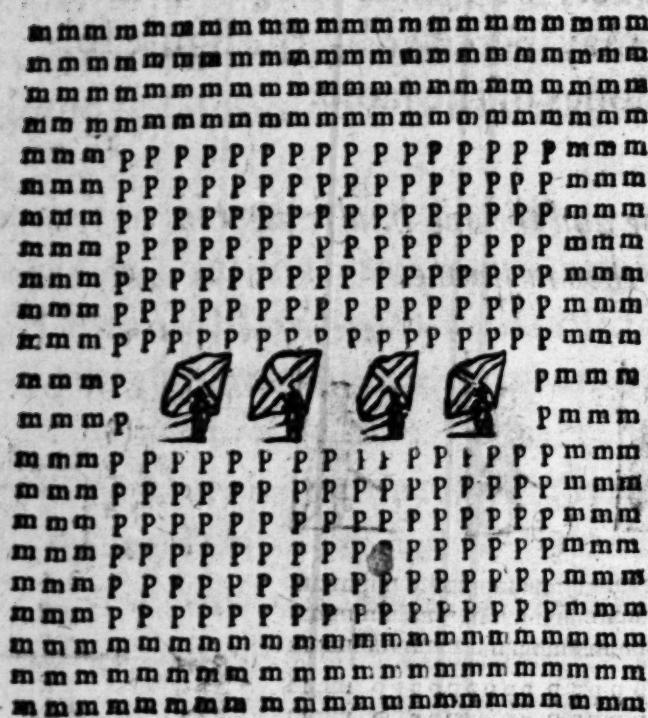


819 m.

L 2

A Squa-

*A Squadron of so muche and one thirde parte more
in fronte then in flanke.*



208 pikes.
2 pikes.
42 musk.
42 musk.
88 musk.
66 musk.
12 musk. remaininge.

$1\frac{1}{3}$ 460.

19	$1\frac{1}{3}$ - 210 pik.
13	250 musk.
<u>16</u>	460.
3/3	70
14	33
3	210
<u>42</u>	70
14	2
3	18(4
<u>42</u>	288
42 m.	16 fr.
42 m.	2
84	28(2
250 m.	288
84 m.	13 fl.
<u>166 m</u>	16
(1)	13
2(2)	48
188}7.	162
22	210
<u>17</u>	210
3/4	250
22	28(12
4	288
<u>88</u>	460
22	153
3	(3
<u>66</u>	28(7
	288
	24
	4

Some times occasion and situation may offer to frame a squadron of so muche and one thirde parte more in front then in flanke, whiche the Spaniarde *Caule tanto y un tercio*, whiche i suppose to be of 460. Souldieres of the whiche 210. are pikes and 250 musketes, and consideringe that a sargent may or any perfect souldier oughte not to be ignorant in the framinge of all sortes of squadrones as tyme occasion and situation shall require, wherfor i thought

fit

fitt to set downe the rules for the framinge of any suche or semblable sortes of batteles, nowe biginenge withe the aboue nūber. To wourke the whiche firste take the propounded number of 210. pikes, that don devide it by 3. the quotiente wherof will by 70. this 70. the 3 parte of the propounded number, ad to it the propounde nūber of pikes and it wilbe 280. oute of whiche take the square roote whiche wilbe 16. and 24. remainenge and say that 16. is the fronte of youre battell; that don, to finde oute the flanke devide 210. the propounded number of pikes by 16. the fronte, the quotiente wherof will be 13. and two pikes remainenge, and say that 13 is the flanke and 16 the fronte and two pikes remayninge, to see of youe have don well, multiply the fronte by, the flanke addinge to the producte of youre multiplicatiō the remainder, and if it agrie withe youre propounded number of pikes it goes well.

Nowe for the devition of youre propounded number of shott whiche is 250. musketes take the whole number of shott and pikes, whiche is 460. and divide the same by 3. whiche quotient youe shall finde to be 153. and one remainenge, nowe these 153. the quotiente of youre laste devition of the propounded number of 460. the producte of whiche 2. additiones wil be 613. that don take the square roote of 613. which will be 24. the fronte of the number, nowe to finde oute the flanke, take youre principall number of pikes and shott whiche is 460. whiche youe are to devide by 24. the square roote of 613. and the number in the quotiente will be 19 and 4. remayninge and say that 24. is the fronte and 19. the flanke, that don deducte 13. the flanke of youre squadron of pikes oute of 19. the laste flanke and there shall remaine 6. this 6. divide into two partes and youe shall finde 3. in eache parte, and say that the firste division of shott is 14. rankes of 3. musketes in eache ranke comprehended one ranke of 3. musketes for the lininge of the culoures of the righte flanke of youre squadron of pikes, and say that the leifte flanke or side of youre battell of pikes are to be lined withe the self same order i meane 14. rankes of 3. musketes in eache ranke; soe is the two flankes of youre battell of pikes proportionally lined withe musketes. Nowe to finde oute the shott that will line the fronte and rerwarde of youre battell of pikes deducte 84. musketes the lininge shott of the two flankes oute of 250. the full number of shott, and there will remaine 166. musketes theese 166. divide by 22. the full fronte of youre pikes of the two

$$\begin{array}{r}
 460 \\
 153 \\
 \hline
 3 \\
 257 \\
 813 \\
 \hline
 24
 \end{array}$$

linges the quotient of whiche wilbe 7. this 7. divide into two partes the one will be 4. and the other of 3. and say that the guarnison of musketes that is to line the fronte is 22. rankes of 4 musketes in each ranke, and 22 rankes of 3 musketes for the linenge of the rerwarde, so is youre battell proportionally guarnished or lined every way, advertisinge that 12. musketes remaine the oute of youre division vvhiche vwill serve for to guarinsh the culoures, so vvith this observation and rule you may divide youre shott of any other suche semblable battelles.

Advertisinge that tvvo pikes, vvhiche dothe guarnish the culoures are above the number the devision of the battell yealdeth, vvhiche at leaste are to be taken oute of some ranke for that inescusable purpose to guarinsh the culoures, as also to be rekoned but once in theire firste division; so that in all squadrones when in the divisiones of theire pikes and shott, shall not reste the conveniente number required for the due lininge of the culoures, then of force must that number be taken oute of some parte of the battell, advertisinge that this number so taken is not to be rekoned but once, and that is vvhere theire firste division sheovveth, as declared in the tabell of the battell, vvhich is the true observation, and explication of the divisiones bothe of the pikes and shott. So is it to be vnderstoode that the number takē oute of thies divisiones for the culours the battell shall containe so many above the number alued in theire firste division, and so for not to err, the divisiones of the table are to be observed for bienge infallible, and for cause that moste comonly of force order and array muste be broken to orderly place the culors in the center as also to guarnish them vvith the conveniente pikes and shott.

A Squa.

*A Squadron of two times more in fronte then
in flanke.*

520 pikes.
488 musk.

1008.

TO finde oute the fronte and flanke of any number of pikes, whiche yove woulde have to be two times more broade then longe or more in fronte then in flanke, whiche i suppose at this instant to be 1008. of the vvhiche 520. are pikes and 488. musketes, firste take the propounded number of pikes vvhiche is 520. and multiply the same by 2. the producte will be 1040. nowe oute of this producte take the square roote, whiche wilbe 32. and 16. remaininge, and say that 32. is the fronte of youre battell of pikes, nowe to finde oute the flanke, take the propounded number of pikes, whiche is 520. This 520. divide by 32. the fronte, and the number in the quotient will be 16. and 8. pikes remaininge so yove founde oute the fronte and flanke, meaninge that 32. is the fronte, and 16. the flanke, and 8. pikes remaininge, in youre laste division, whiche will serve to guarnish the coulours, withe the observation of this rule, yove may frame a battell of pikes eyther of smale or greate numberes, and of whate forme yove will have the same to containe of 3. times 4. times or 5. times more in fronte then in flanke in multiplyinge the propounded number of pikes by the proportion therof, if yove woulde have it containe 3. times more in fronte then in flanke multiply youre propounded number of pikes by 3. if yove woulde have it to containe 4. times more in fronte then in flanke multiply it by 4. and in wourkinge as before taughte yove shall finde oute the fronte and flanke, and there juste proportion; for the impalinge shott i have spoken of in other forme of squadrones, but for suche as woulde be curiouse and experte, is required greate consideration to be had for the severall sortes of divisions of shott, as time occasion and situation shall require, and it is mozte necessary for him that undertaketh this chardge in hãde to by expert in Arithmeticke, and so withe continuall practice shall he withe greate facility bringe to juste perfection all the divisions besfitenge for this purpose, and let none be ingnorante but that for the severall and rare curiosities of the divisions of shott is required muche practice, and specially in Arith-

520
2

1040
(1
32(6
16
32

6
2-1-520 p.
488 m.

1008.

2 1
2 8 1
16
3 2 1
3 1

Aritmeticke, which is the principall fundament in reducenge thees devisiones into there iuste perfection, alwayes consideringe of tyme occasion and situation, as also of afore caste prevention againste the stratageames and orderes of youre enemy.

A Squadron square of men of 3024. Souldieres of the whiche 1764. are pikes, and 1260. musketes divided into severall maniples, and troupes to marche that they may fall into battell presently when occasion is offered as by the figure and divisiones folowinge set downe, and for suche as have not intered into the deepe judgement and practice of this arte. I will here set downe the order of there divisiones, firste take the propounded number of pikes, whiche is 1764. oute of the whiche take the square roote, whiche will be 42. the whiche is the fronte and flanke of youre pikes. That don take the full number of youre shott, whiche is 1260. and divide this by 42. the flanke of the propounded number of pikes, and the number in the quotient will be 30. That don divide 30 the quotient into two equall partes, and youe shall finde the haulfe therof to be 15 so say that 15. shot comes under the shelter of eache pike of youre flanke for the guarnison of the same, I meane to eache of the two flankes, for triall wherof multiply 42. the flanke of the pikes by the quotient of youre laste devition whiche was 30. and the produkte will be the iuste number of shott propounded, And that youe may the more easy perceivethiese devisiones I will set them downe in breefe as heere folowinge youe may see.

1764 pikes.
1260 musk.
<hr/>
3024.

The firste division is 42. rankes of five musketes in eache ranke whiche shall marche in the vangarde of the divisiones of youre marchinge whiche moted. —

210 musketes.

The seconde division of youre squadron is 42. rankes of 7. pikes whiche folowes the firste division of musketes and monteth. —

294 pikes.

The thirde diuision that folowes the seconde shall marche withe 42 rankes of 7. pikes in eache ranke whiche monteth. —

294 pikes.

The fourthe division shall be of 42. rankes of musketes of 5. in eache ranke monteth. —

210 pikes.

The fiftie division shall marche withe 42. rankes of pikes of 7. pikes in eache ranke whiche monteth. —

294 pikes.

The sixte division is 42. rankes of musketes of 5.

muske-

musketes in eache ranke whiche is the laste division of
shott of the vangarde and linenge shott of the right
flanke of the Squadron of pikes whiche monteth. —

210 musketes.

So are the pikes and shott of the vangarde divided
and the reste of youre shott and pikes are divided as
folowethe.

The firste division of the rergarde is divided into
42. rankes of 5. musketes in eache ranke whiche shall
marche in fronte of the linēge shott of the liefte flan-
ke of youre battell whiche monted. — — — — —

210 musketes.

The seconde division of the reregarde is 42. rankes
of 7. pikes in eache ranke whiche monted. — — — — —

294 pikes.

Vhe thirde division of the rergarde is divided into
so many more rankes. — — — — —

294 pikes.

The fourthe division of the reregarde is 42. rankes
of 5. musketes in eache ranke the firstwinge of shot of
the lefte flanke of the battell of pikes. — — — — —

210 musketes.

The fifthe division is 42. rankes of 7. pikes in eache
ranke monteth. — — — — —

294 pikes.

The sixte division of the rergarde is divided into
42. rankes of five musketes in eache ranke for the se-
conde winge of shott of the liefte flanke. — — — — —

210 musketes.

If youe woulde have the one haulf of youre shot to
marche by them selves in the vangarde of the pikes as

3024.

comonly many do, youe may withe ease and breuety in obseruinge
the same diuisiones and withoute breakinge of any rake, in onely co-
mandinge that the firste 3. diuisiones of shott do marche in the vant-
garde, and then cause all the diuisiones of pikes to folowe, obseruen-
ge there order as before set downe, plasinge the culores in the cen-
ter, and after them in therergarde to marche the other 3. diuisiones
of shott which is for the linenge of the liefte flanke and obseruinge
their order as before spoken of.

M

M.

MILITARY

M.	mmmm	M.	mmmm	1764 pikes. 1260 musk. <hr/> 3024. men.
P.	PPPPPP	P.	PPPPPP	1764 <hr/> 42 fr.
P.	PPPPPP	P.	PPPPPP	<hr/> 42 42 <hr/> 84 168 <hr/> 1764
M.	mmmm	M.	mmmm	<hr/> 42 5 <hr/> 210 <hr/> 42 7 <hr/> 294
P.	PPPPPP	P.	PPPPPP	<hr/> 42 5 <hr/> 210 <hr/> 42 7 <hr/> 294
M.	mmmm	M.	mmmm	<hr/> 42 5 <hr/> 210 <hr/> 42 7 <hr/> 294.

By the

By the figure followinge youe see the saide divisions fall oute of their marche in to battell, and proportionally lined on the two flankes with the 1260. musketes, as by the divisions of the same, and the figure followinge youe may see as the table of the divisions of the battell here followinge sheweth.

Youe shall understande that in the division of the pikes there did remaine nothinge, and for bienge inescusable to guarinsh the coulours with the pikes and shott, i cutt of the fronte of the battell one ranke which containes 42. pikes and 30. musketes, of thies pikes 20. shall guarinishe the two flankes of the coulours and the other 22 pikes shall by imploied for other purposes, and the 30. musketes with other 30. that are to be taken oute of the battell shall guarinsh the coulours, so for suche as for curiositie woulde confronte this rekoninge it is necessary they knowe the difference is that 60. musketes are to be taken oute of the battell to guarinsh the coulours as before declared. Which are to be rekoned but once for otherwise there shall by 30. musketes difference.

The pikes contained in the boddy of the battell.

The pikes that doth guarinsh the coulours.

Pikes employed in ocasioness of service.

_____	1722.	p.
_____	20.	p.
_____	22.	p.
_____	1764.	p.

1764 pikes.
1260 musketes.
3024 men.

Table of the battell.

210 musketes.
294 pikes.
294 pikes.
210 musketes.
294 pikes.
210 musketes.
210 musketes.
294 pikes.
294 pikes.
210 musketes.
294 pikes.
210 musketes.

3024 men.

M 2

SQUARE

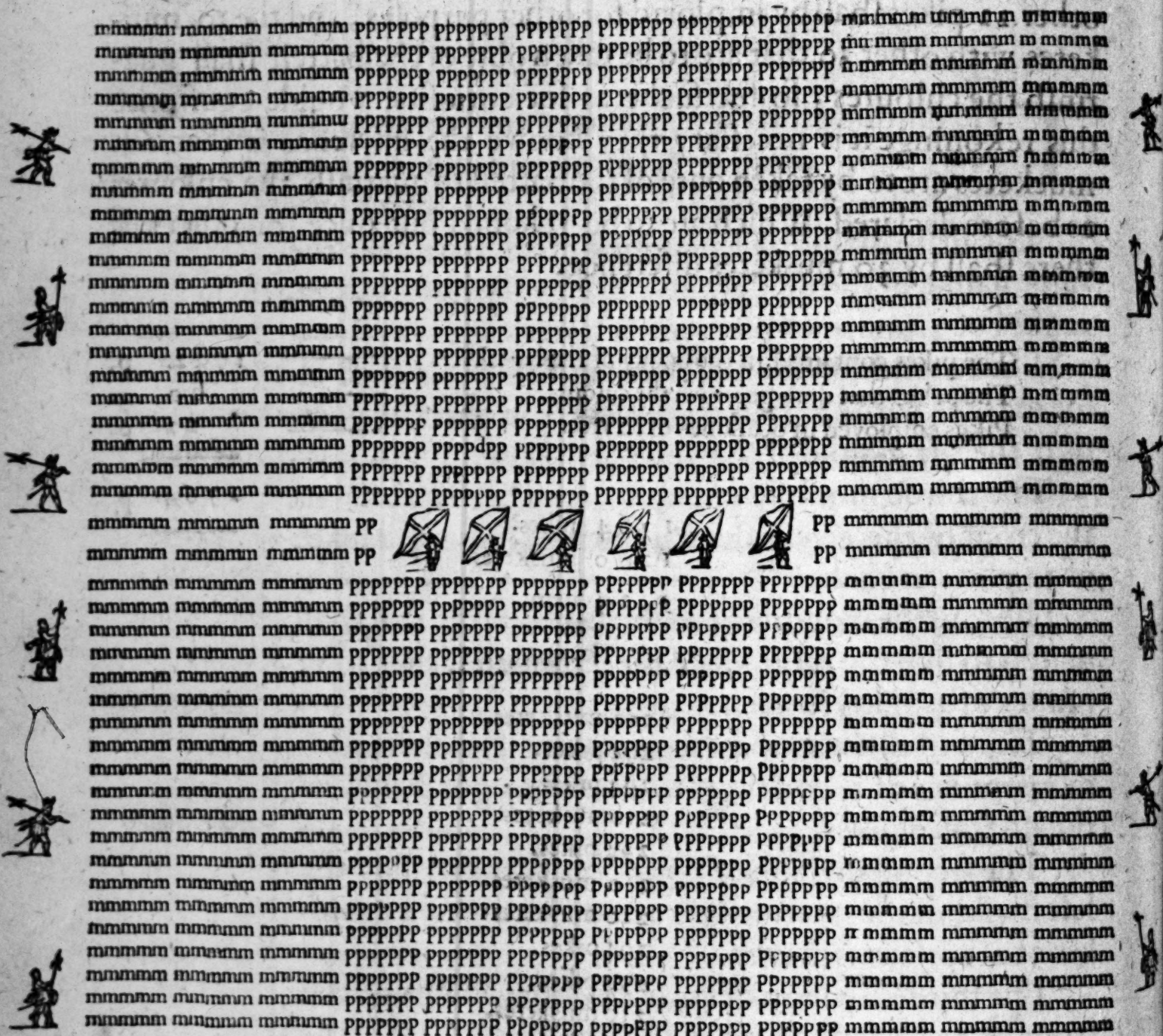
MILITARY SQUARE OF MEN.

1764 pikes.
1260 musk.

3024. men.

3024.

FRONT OF THE BATTELL.



A Bat-

*A battell square of men whiche occupys place of 694. men in which battell goes
a voide center which occupys rounge of 49. men a pointed for the safe-
tie of hurte men and amuniones, or for unarmed
men and bagadge.*

The emptie center.	_____	49 men.
Unarmed pikes.	_____	121 pik.
Armed pikes or Corseletes.	_____	172 Corse.
Musketes.	_____	352 mus.
		<hr/> 694.

THe emptie center for hurtemen amunion and bagadge ocu-
pies place of 49. in fronte and allsoe in flancke whose
fronte and flancke is 7.

The firste division of unarmed pikes that lines the
right flancke of the voide center shall be devided into 7.
rankes of 3. unarmed pikes in each ranke. _____ 21 pikes.

The seconde division of the unarmed pikes shall al-
soe marche withe 7. rankes of 3. pikes in each, to guar-
nish the left flancke of the voide center. _____ 21 pikes.

The thirde maniple of unarmed pikes that shall line
the front of the center shall be divided into 13. rankes
of 3. pikes in each _____ 39 pikes.

The fourthe maniple of the unarmed pikes that shall
march to line the rergarde of the center divided into 13
rankes of 3. pikes in each ranke. _____ 39 pikes.

The first division of armed pikes shall be divided in-
to 13. rankes of 3. corseletes to line the right flancke of
the unarmed pikes. _____ 39 corselet.

The second division of corseletes that doe line the
left flancke of the unarmed pikes is divided into 13. ran-
kes of 2. corseletes in each. _____ 26 corselet.

The thirde division of corseletes that shall line the
front of the vnarmed pikes shall be divided into 18.
rankes of 3. corseletes in each. _____ 54 corselet.

The fourthe division or maniple of corseltes that
shall line the rergarde of the unarmed pikes shall be di-

vided into 18. rankes of 2. corseletes in eache ranke. —

36 corf.

In the divisiō of the armed and unarmed pikes there
did remaine 18. pikes of the whiche 17. are corseletes. —

18

293.

THe division of the 352 musketes of the fied Squadron to line the battell proportionally everie way shall be divided in this maner followinge, the rules bothe for this division, as also for the divisiones of the drie pikes and corseletes. I will set downe after this.

The firste division of shott of the saide Squadron shall march in the vangarde withe 18. rankes of 4. musketes in each ranke for the lininge of the right flanke of the battell of pikes monteth. — —

72 mus.

The seconde division of the uangarde shall marche withe 18. rankes of 4. musketes in each ranke for the linenge shott of the lieft flanke of the Squadron. —

72 mus.

The first division of shott of the rergarde shall be divided into 26. rankes of 4. musketes in each ranke for to line the front of the battell. —

104 mus.

The second division of shott of the rergard shall be divided into 26. rankes of 4. musketes in each ranke which shall line the rergarde of the battell. —

104 mus.

352 mus.

Table of the Battell.

49 the center.

21 p.

21 p.

39 p.

39 p.

39 c.

26 c.

54 c.

36 c.

17 c.

1 p.

342 p. and c.

72 m.

72 m.

104 m.

104 m.

694.

94 center.

293 p. c.

352 m.

694.

49 cen.

I Do not doubt but many who have not longe practised in the framinge of Squadrones, and that are not skilfull in the severall divisions of the same, and in particular suche as are not able in Arithmetike, will in the begining finde greate difficulte in well orderinge and dividinge in proportion thiese battelles with the centeres, and lined every way proportionally with the sundrie sortes of weapons. Wherfore I thought fit to set downe in writinge the maner of theyre severall divisions. To worke the whiche youe muste begin with the center; Then with the divisions of youre unarmed and armed pikes, and then with the divisions of youre shott to see how they fall to line the Squadron of pikes in proportion as here folowethe.

To worke the whiche, firste begin with 49. youre propounded number for the void center, and demaunde for the square roote of 49. whiche is 7. so youe finde that 7. is the front and flanke of the void center, that don say that youre void place or center occupies 21. foote in front and 49. in flanke, then place downe 49. the center and 121. the unarmed pikes whiche two adisions, will amont to 170. oute of whiche take the square roote which is 13. and say that 13. is the front of the unarmed pikes with the void center, that don subtract 7. the front of the center oute of 13. the front of the center and unarmed, and youe shall finde that 6. remaniethe, this 6 divide by 2. and the quotient will be 3. so say that by youre division youe finde that 3. unarmed pikes comes to the linenge of the center everie way, beginenge firste with the right flanke of the center which is 7. and say the linenge of pikes of that flanke is 7. rankes of 3 pikes in eache ranke, and iuste so many more rankes for the linenge of the leift flanke of the center, conteinenge 21. pikes in each linenge, so by youre division youe founte the 2. linenges of pikes of the 2. flankes of the center. Nowe say 7. the front of the center and 6 the 2. linenges of the same maketh. 13. the front of the center and 2. linenges, nowe say that the thirde maniple of unarmed pikes that shall line the front of the center and the 2. linenges of the same, shall marche with 13. rankes of 3. drie pikes in each ranke, so the 2. flankes and front of the center are lined: that don say that the 4. maniples of unarmed pikes are to be divided into 13. rankes of 3. pikes in each ranke for to line the rergarde of the void

94 center.

121 p.

172 c.

352 m.

void center, and say that the center is proportionally lined everie way with the unarmed pikes, and that one unarmed pike did remaine in youre laste division.

Nowe to divide the armed pikes, to line the unarmed proportionally every way, take the full number of the center, of the unarmed, and armed pikes propounded, which 3. partisiones dothe amonthe 342. that don take the square roote of this number which wilbe 18. and resteth 18. of the which 17. are armed pikes and 1. unarmed, nowe substraet the square roote 13. oute of the square roote 18. and there shall reste 5. this 5. divide and say that 3 comes to line one way, and 2. armed pikes the other side of youre unarmed pikes; then say that the firste division of armed pikes that shall line the right flanke of the unarmed, muste march with the 13. rankes of 3. armed pikes in each ranke which dothe amonth to 39. so say that the right flanke of the unarmed is lined with corseletes, nowe in the seconde division of corseletes shall march 13. rankes of 2. armed pikes or corseletes in each ranke to line the leifte flanke of the unarmed as by youre division so falleth oute, nowe say that the 2 flanks of the unarmed pikes are lined with the corseletes. Then in the third division of the corseletes shall march 18. rankes of 3. corseletes in each ranke for the linenge of the full front of the unarmed pikes, and ceter. That don cause the fourth division or maniple of corseletes to marche with the 18. rankes of 2. corseletes in each ranke for the linenge of the rer-garde of the battell so say that the voide center is proportionally lined with the unarmed pikes, and the unarmed with the corseletes, and that there did reste 18. pikes whiche shall serve to guarinshe the colours in the center, advertisinge that 17. are corseletes and 1. unarmed pike all which diuisiones youe se ordered as by the figure followinge apeereth; nowe to divide youre propounded number of shott which was 352 musketes take the full number of the center of the armed and unarmed pikes, as also of the musketes whiche will amonte 694 oute of whiche take the square roote whiche will by 26. oute of whiche substraet 18 the square of the center of the armed and unarmed pikes, and there shall reste 8. this 8 divide into two partes and each parte will by 4 and say that to guarinshe the righte flanke of the squadron of pikes youe are to marche with 18. rankes of 4. musketes in each ranke, and with the iuste so many more shall youe guarinishe or line the leifte flanke of the full number of pikes, nowe to
finde

finde oute the lininge shott of the frōte and rerwarde, say that adinge to 18. the fronte of the pikes 8. of the two linenges of the two flankes it makethe 26. and then say that to guarinshe the full fronte youe are to marche withe 26. rankes of 4 musketes in each ranke, whiche is the lininge shott of the fronte, and iuste so many more rankes shall guarinishe the rerwarde of the battell of pikes meaninge 26. rankes of 4. musketes in each ranke and so is youre battell proportionally lined every way as the figure and divisiones folowinge sheowethe.

N

A Squa-

	Pikes.	Musketes.	Soilderes.
Spaniardes.	1040	840	1880.
Italianes.	0888	780	1668.
Irishe.	0946	760	1706.
Englishe.	0840	740	1580.
Borgonones.	0847	694	1541.
Valones.	0939	686	1625.
	5500	4500	10000.

A battell square of men framed of six nationes, and who they shall unconfusedlie fall into battell withe grace and brevitie, dividinge to each nation his parte of the vangarde, acordinge the number of men they give in relation, as by the figure folowinge are orderly divided, to fall into battell of a sodaine withoute any crossinge or cofusion, with the ensignes of each nation in the center of their pikes.

THe enemy aproachinge and understandinge that they are resolved to give battell, the campe Master generall knowinge of the prudent brave conduction, and resolute determination of the Spaniard, Italian, Irishe, Englishe, Borgonones, and Valones, commaundeth that there shoulde be chosen oute of thiese nationes to the number of 10000. of chosen men of tried valor and full resolution givenge order that a battell square of mē shoulde be framed of the saied 10000. men, and for feare of confusion or contraverſie in tyme of fallinge into Squadron, he giveth the order that the Italianes shoulde folowe the Spaniardes, the Irishe to folowe the Italianes, the Englishe to folowe the Irishe, the Borgonones after the Englishe, and the Valones to folowe, the Burgonones, and that eache natiō shoulde folowe one another as before declared withe the fronte and flanke that toucheth eache nation acordinge to the number of men they give in relation, that withe grace and brevity and withoute any crossinge or confusion eache nation may fall into Squadron of a sodaine, and that eache nation may have his parte of the vangarde acordinge to the number of men he giveth in relation. To wourke the whiche i thought fit to set downe the rules for the divisiones of theese nationes, as here foloweth.

Firste take the full number of pikes given in relation by the saide six Nations, which is 5500. oute of whiche take the square roote, whiche is 74. the fronte and flanke of the battell, and 24. pikes remaininge, whiche shall serve to guarnishe the coulours. That done begin to guarnishe or line the two flanks of the battell of pikes withe shott aleowinge five shot under the shelter or defence of eache pike, whiche is the moste that can conveniently be defended under the same. To finde oute the linenge shott of the righte flanke of the battell of pikes, as before ordained, multiply 74. the flanke by 5. and the produ-
 cte will be 370. and say that the linenge shott of the right flanke is 74. rankes of 5 musketes in eache ranke, and say that the righte flanke of the battell of pikes is lined withe shott. To guarnishe or line the leifte flanke of the battell of pikes, also say that it is 74. rankes of 5. musketes in eache ranke whiche makethe 370. musketes, and say that youe two flanks of the battell of pikes are lined, nowe to knowe the shott that shal guarnishe the full fronte of the pikes, and of the two linenges of the 2. flanks, ad 10. the musketes of the 2. linenges to 74. the fronte of the pikes, and it makethe 84. the full fronte, then say that the division of shott that shall line or guarnishe the full fronte is to marche withe 84. rankes of five musketes in eache ranke, and iuste so many more rankes shall marche in the fourte division of shot that shall guarnish the full fronte of the rerewarde, advertisinge that eache division of the two last that lines the fronte and rerwarde containes 420. musketes in eache, so that the full number of shott of the afore saied 4. divisiones that shall line the two flanks fronte and rerwarde dothe amounte to 1590. musketes, comprehended 10. musketes for to guarnish the coulours, thiese 1590. musketes deducte oute of the propounded and full number of musketes whiche is 4500. and there shall remaine 2910. musketes whiche i divide into 30. troupes whiche comethe to 97. musketes in eache troupe, the whiche 30. troupes is divided in the 4. angles and two flanks of the battell as by the figure and divisiones folowinge youe may better perceive, where all is ordered and set downe, and withe as greate facility as the divisiones can affourde, that there by suche as are not experte in arithmeticke nor in the theorike and practike of this arte may the sooner conceive the same.

370 m.

370 m.

420 m.

420 m.

10 m.

1590 m.

4500

1590

2910.

Pikes.

	Pikes.	Musketes.	Soilderes.
Spaniardes.	1040	840	1880.
Italianes.	0888	780	1668.
Irishe.	0946	760	1706.
Englishe.	0840	740	1580.
Borgonones.	0847	694	1541.
Valones.	0939	686	1625.
	5500	4500	10000.

THe full number of shott
of the saied six nationes
monted.

Oute of whiche is to be de-
ducted the divisiones of the 4.
linenges.

So that after deductinge the
linenge shott of the 4. frontes
of the battell of pikes resteth
2910. m. Whiche is divided into
30. troupes at 97 m. in eache
troupe, whiche are divided in
the 4 angles and two flankes of
the battell of pikes as by the fi-
gure and divisiones folowinge
ordered and proportionally di-
vided. Advertisinge that oute
of one of the troupes of mus-
ketes of the angles youe are to
take 10. musketes to guarnishe
the culores.

(24)	4500 m.	2(2)
3* } 2-24	1590 m.	6*(4)
7* }	2910 m. resteth.	7* }
7* }		7* }
2(0)		
2910 } 97	3*(4)	14-41
30 }	7* }	74
30 }		74
		296
4500 m.	7* }	3184
	12-10	296
1590 m.	(5)	74
	8	5
2910 m.	2*(8)	370 m.
	9* }	74
	7* }	5
		370 m.
2(0)	(2)	74
2910 } 97	3	5
30 }	2*(6)	3
30 }	11-26	84
	7* }	5
		420 m.
97	(8)	84
30	2*(3)	5
	11-33	420 m.
2910 m.	7* }	
		370 m.
	2(5)	370 m.
	29(4)	420 m.
	12-51	420 m.
	7* }	10 m.
	172.	1590 m.

The divisions of the pikes and the order wherewith each nation shall marche to fall into battell with the grace and brevety.

BY the divisions of the pikes before spoken of in dividinge 74. the flanke of youre Squadron of pikes be 1040. the number of pikes the Spaniardes gave, yove shall finde the number in the quotient to by 14. and 4. remayninge and say that the Spaniardes are to marche with the 74. rankes of 14. pikes in eache ranke whiche is the order they are to observe when occasion offereth to fall into Squadron with the there coloures in the center of there pikes, advertisinge that there resteth 4. pikes oute of there division.

14 front. - 4.

The Italianes who gave relation of 888. pikes is divided by the self same rule into 74. rankes of 12. pikes in eache ranke, and in offeringe occasion without any crossing or confusion shall fall into battell with this order, and close uppon the leifte hande of the Spaniardes with the coloures in the center, and conforme them selves with the Spaniardes in fronte and flanke.

12 front.

The Irish who gave relation of 946. pikes, shall be divided into 74. rankes of 12. pikes in eache ranke with the theyr coloures in the center of theyr pikes, and resteth 58. pikes oute of there division, and they shal fall into battell with this order, and close uppon the leifte hande of the Italianes.

12 front. - 58.

The Englishe who gave relation of 847. pikes is divided into 74. rankes of 11. pikes in eache ranke with the there coloures in the center, and resteth 26. pikes.

11 front. - 26.

The Borgonones who gave relation of 841. pikes are divided into 74. rankes of 11. pikes in eache ranke, and 33. pikes remaininge, and with the there coloures in the center shall close uppon the leifte hande of the English, when occasion offereth.

11 front. - 33.

The Valones who gave relation of 939. pikes is di-

vided

vided into 74. rankes of 12 pikes in eache ranke, and 51. pikes remaininge, and in offeringe occasion to fall into Squadron shall observe this order, and ioyned upon the leifte hande of the Borgonones with the there coulours in the center.

12 front. - 51.

Advertisinge that of the 172. pikes that did remaine in the divisions of the Spaniardes, Irishe, English, Borgonones, and Valones. They shall be divided into 74. rankes of two pikes in eache ranke and shall close upp on the leifte hande of the Valones when occasion shall offer to fall into battell, and there shall reste 24 pikes.

2 front. - 24.

The first division of shott that shall guarnishe or line the righte flanke of the Squadron of pikes is divided into 74 rankes of five musketes in eache ranke, consideringe that a pike can hardly defende under the shelter or defence of the same above five shott at the moste.

74 front. - 24.

370 musk.

The seconde division of shott that shall guarnishe the leifte flanke of the battell of pikes is divided into 74. rankes of five musketes in eache ranke.

370 musk.

The thirde division of shott that is to guarnishe the full fronte of the battell of pikes, and the two linges of the same is divided into 84. rankes of five musketes in each rank.

420 m.

The fourthe division of shott that is for to guarnishe the rerewarde of the battell of pikes, and the two linge shott of the two flanks is divided into 84. rankes of five musketes in eache ranke.

420 m.

In the division of the full number of shott there did remaine oute of the division 10. musketes that is to guarnishe the coulours as in the divisions of the shott is set downe.

10 m.

After lininge youre Squadron of pikes proportionally every way as be fore declared, the 4. garnitions of shott montes 1590. musketes whiche are to be subtracted oute of the principall some or number of musketes whiche is 4500. there shall remaine 2910. musketes, this remainder divide into 30. troupes and

1590 musk.

4500 m.

1590 m.

2910 m.

youe

youe shall finde by youre division eache troupe to containe 97. musketes ordered and divided in the foure angles and two flankes of the battell of pikes to skirmishe acordinge as tyme occasion, and situation shall require as by the figure folowinge youe may see who all thiese divisiones do fall oute of there marche into a perfect Squadron in the forme and maner as before declared and sett downe. Advertisinge that oute of the laste troupe of musketes on the lieft angle of the battell muste by taken 10. musketes for the lininge shot of the culoures, so that troupe of musketes containes but 87. musketes and all the reste 97, so that 10. muskets differeth.

$$\begin{array}{r} 28 \\ 2918 \\ 300 \\ \hline 97m. \end{array}$$

$$\begin{array}{r} 97 \\ 30 \\ \hline 2910. \end{array}$$

Advertisinge that the culoures of eache division of pikes shall marche in the center of the same, so that when occasion shall offer they may with grace and brevity fall into battell array, and without any crossinge or confusion nor cuttinge of frankes nor order as many do, but unconfusedly with grace, and brevity fall into battell, as by the figure followinge youe may see, the 10. musketes youe take oute of one of the troupes of the angles for to guarnish the culoures are to be reckoned in their due place as the divisiones of shott sheweth, and youe are not to reken them in the battell by reason they were borrowed oute of one of the troupes of musketes.

And let none by ignorante that when the conveniente number of pikes and shott do not remaine oute of the divisiones to guarnish the culoures, then of force order and array muste be broken, in cuttinge the shott and pikes necessary to guarnish them, and so for not to err in the rekeninge the divisiones of the table of the battell are to be observed (for beinge infalible) and for bienge the producie: of the generall rule of all the divisiones of the battell, so is it to be understoode that there is no better surer nor brifer rule for this purpose.

By the figure folowinge and by the table and divisiones of the same you may see who eache nation doth march with the fronte and flanke acordinge the number of men they gave in relation, advertisinge that the culoures of each nation are to march in the cinter of their division of pikes, and the 74. rankes of pikes of 2 pikes in ranke that did remaine oute of the divisiones of the saide 6. nationes shall close upp on the leifte flanke of the battell of pikes as be the figure and divisiones followinge youe may plainly see who orderly oute of there march they fall unto battell with grace and brevity.

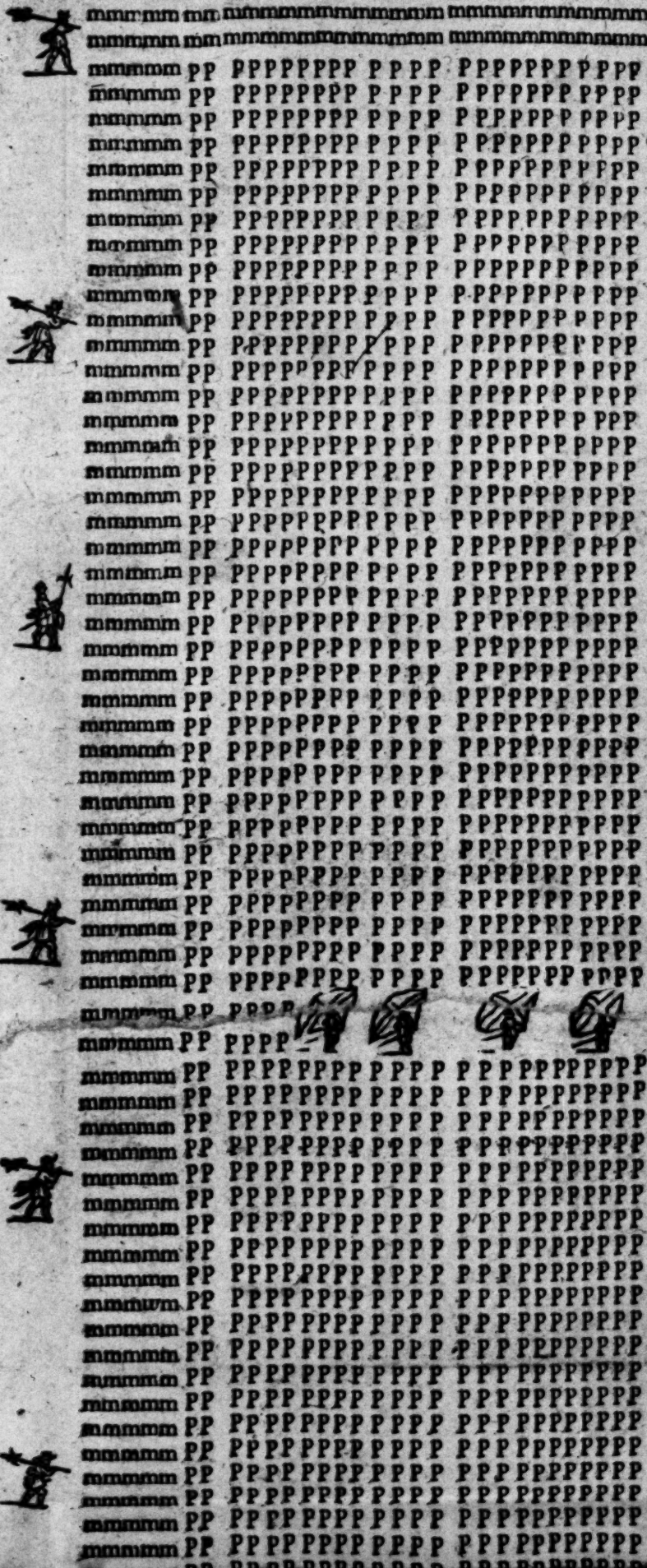
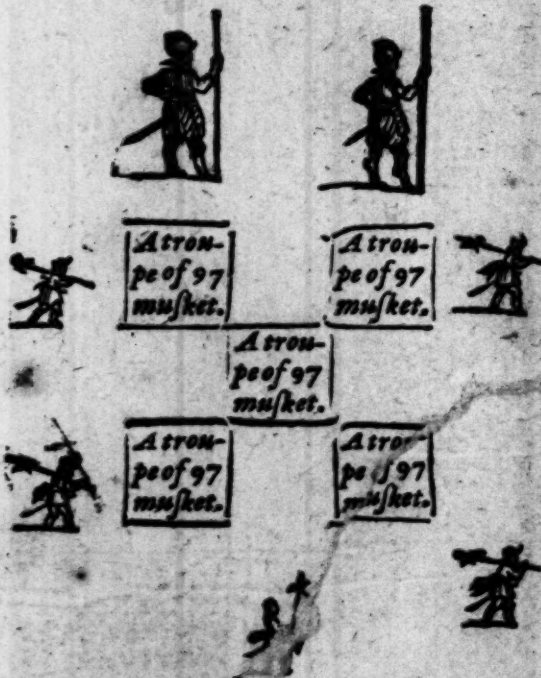
FRONT

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but 87.

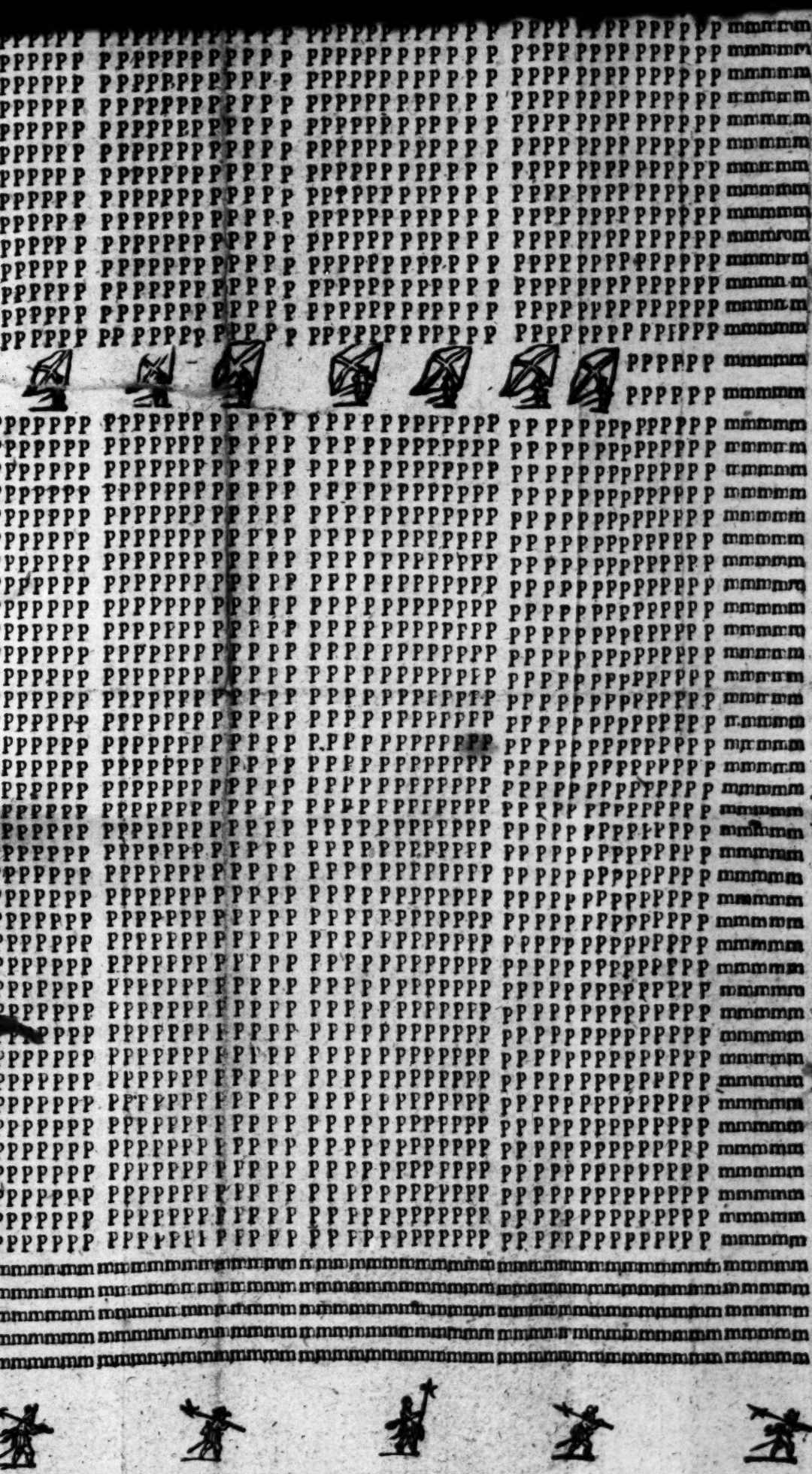
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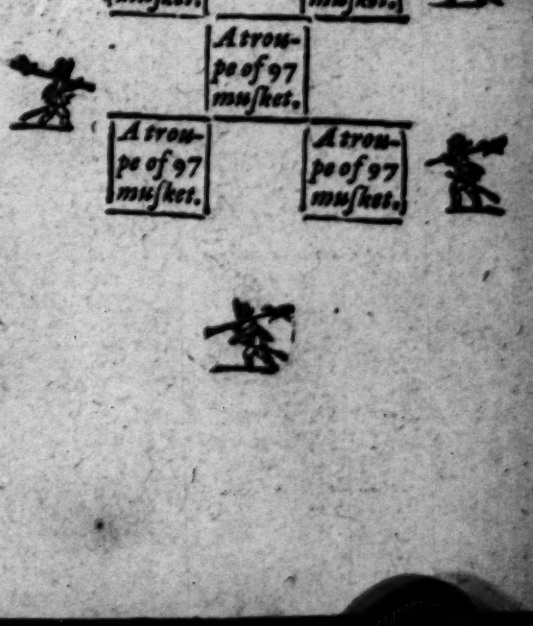


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5500 pri



OF THE BATTEL.		
14 pikes.	The lininge shott of the righte flanke of the battell of pikes.	0370 musk.
6 pikes.	The lininge shot of the leifte flanke.	370 musk.
8 pikes.	The guarnifion shot of the fronte monted.	420 musk.
38 pikes.	The guarnifion of the reregarde.	420 musk.
4 pikes.	Shot remaininge oute of the divisiones.	020 musk.
4 pikes.	2900. musketes divided into 30. troupes.	2900 musk.
38 pikes.		4500 musk.
8 pikes.	Advertisinge that oute of one of the troupes of mus ketes are to betaken 10. musketes with the other 10. that did remaine to guarnish the culoures; still observinge the divisiones of the table for beinge infalible.	
24 pikes.		
0 pikes.		



The greate battell of 10000. men before spoken of, is nowe divided into three battelles square of men as by the figure folowing appeereth.

OF the then thousande men (before spoken of, and of whiche were framed abattell square of men, and all redused into one boddy as before set downe, and the forme of there divisiones. Nowe suppose that the Campe master generall woulde have the self same nūber of 10000. men to be divided into three battelles square of men and to observe suche goode order in there divisiones that withe grace, and brevity and withoute any crossinge or confusion they may fall oute of there marche into battell, as by the divisiones, and figure folowinge youe may see. Advertisinge that of the Spaniardes and Italianes there shall by framed one Squadron, and of the Irishe and English another, and of the Borgonones and Valones an other.

	Pikes.	Musketes.	Soulderes.
Spaniardes.	— 1040	— 840	— 1880.
Italianes.	— 0888	— 780	— 1668.
Irishe.	— 0946	— 760	— 1706.
Englishe.	— 0840	— 740	— 1580.
Borgonones.	— 0847	— 694	— 1541.
Valones.	— 0939	— 686	— 1625.
	5500	— 4500	— 10000.

	Pikes.	Musketes.	Soulderes.
Spaniardes and Italianes.	— 1928	— 1620	— 3548.
Irish and English.	— 1786	— 1500	— 3286.
Burgonones and Valones.	— 1786	— 1380	— 3176.
	5500	— 4500	— 10000.

NOwe to oure pupose take the full number of pikes of the Spaniardes and Italianes whiche is 1928. pikes oute of whiche take the square roote whiche will by 43. and 79. pikes remainenge, consideringe that 79. pikes are muche to remayne oute of the
 O squa.

squadron divide 79 by 43. the square roote, and the number in the quotient will by one, and 36. pikes yet remayninge, this one youe founde oute of 79. ad it to 43. and it will by 44. and 36. pikes remayninge, and say that 44. is the fronte of the battell of pikes, and 43. the flanke, nowe consider that hardly aboue 4. shott can by, conveniently defended under the shelter and defence of the pike. And say that youe will line youre battell of pikes proportionally by 4. musketes every way. This resolution taken multiply 43. the flanke of the battell of pikes by 4. musketes the linenge shott, the producte wherof will by 172. musketes for the linenge shott of the righte flanke of youre battell of pikes, and iuste so many more for the linenge shott of the leifte flanke of the battell of pikes. That don ad 8. the linenge shott of the two flankes to 44. the fronte of the battell of pikes whiche two aditiones makethe 52. the full fronte of the pikes and 2. linenges of the two flankes, nowe to guarnishe the fronte of the battell of pikes multiply 52. by 4. the producte wherof will by 208. musketes whiche is the number of shott that shall guarnishe the fronte of the battell, meaninge 52. rankes of 4. musketes in eache ranke. That done say that the two flankes and fronte of the battell are lined withe shott. Nowe to guarnishe the rewarde of the battell, observe the self same order, and number wherewith youe did guarnishe the fronte of the battell whiche was 52. rankes of 4. musketes in eache ranke, and withe so many shall youe guarnishe the rewarde of the battell, and say that youre battell is proportionally lined every way withe shott.

$$\begin{array}{r} 43 \\ 4 \\ \hline 172 \end{array}$$

$$\begin{array}{r} 52 \\ 4 \\ \hline 208 \end{array}$$

Nowe for the division of the reste of youre shott take 1620. musketes the full number of shott propounded, oute of whiche deducte 760. musketes the girdelinge shott of the 4. frontes of youre battell, and there shall remaine 860. musketes. Whiche i divide into 14. troupes of 60. musketes in eache troupe, of the which one troupe shall containe 74. musketes by reason the division so falleth oute, and divided on the two flankes of the battell as by the divisiones, and figure followinge apere the, whiche is the firste battell of the three, and on the righte hande; advertisinge that in the laste division of shott there did remaine 6. musketes where with youe may guarnish the coulours with them, and with the 36. pikes that did remaine oute of the division of youre pikes, so youre propounded number of pikes and shott are divided.

$$\begin{array}{r} 1620 \text{ m.} \\ 760 \text{ m.} \\ \hline 860 \text{ m.} \end{array}$$

Ad.

DISCIPLINE.

107

Advertifing that the fronte of this battell is 44. and the flanke 43. multipliege the one by the other and adinge there vnto 36 pikes that doe guarnishe the coulours makethe the propounded number of pikes, whiche was 1928. as by the divisions followinge apeerethe, advertifing that youe are to cut ten musketes that wantes for the guarnifion of the coulours, oute of one of the troupes, which youe shall finde to muche in the battell, be reason they are borrowed of one of the troupes so folowe the divisions as they are set downe in the table which is the righte way, and infalible.

Table of the firste battell.

[illegible]

02

Pikes.

	Pikes.	Musketes.	Souldieres.
Irishe.	— 946	— 760	— 1706.
Englishe.	— 840	— 740	— 1580.
	1786	1500	3286.

THE SECONDE BATTELL.

Nowe that yove have done withe the number of pikes and shott the Spaniardes and Italianes gave. Take the 3286 men whiche is given in relation be the Irishe and Englishe, of the whiche 1786 are pikes, and 1500. musketes. To reduce them into a perfect square of men, and to be proportionally lined and garnished every way withe shott. To worke the whiche, firste take the number of pikes whiche is 1786. oute of whiche take the square roote whiche will by 42 and there shall remaine 22. pikes whiche may be employed to garnishe the coullores, that don say that 42. is the fronte and flanke of the battell of pikes and 22. pikes remaininge. And suppose, that occasion offerethe, that youe finde necessary the lininge shott not to pass 3. in ranke under the shelter, and defence of a pike. Nowe to finde oute the lininge shott of the righte flanke of youre battell of pikes multiply 42. the flanke of the pikes by 3. musketes that is allowed for the linenge shott, the producte wherof will by 126. or 42. rankes of 3. musketes in eache ranke, then say the righte flanke of the pikes are lined withe shott, and iuste so many more rankes of shot shall serve for the lininge of the leifte flanke of the battell of pikes, observinge the self same number and order as did the linenge shott of the right flanke of the battell of pikes whiche is 42. rankes of 3. musketes in eache ranke whiche monteth to 126. musketes, nowe to garnish the fronte of the battell of pikes whiche is 42. ad therunto the two lininges whiche 3. aditiones will by 48. the full fronte of the pikes, and of the two lininges whiche youe shall multiply by 3. the producte wherof will by 144. musketes or 48. rankes of 3. musketes in eache ranke, so the two flankes and fronte of the battell of pikes are proportionably lined.

Nowe to garnish the reregarde of the battell of pikes withe shott, observe the self same order before set downe

42
3
3
—
48
48
3
—
144

for

for the lininge of the fronte of the pikes. That is to say 48. ran-
kes of 3. musketes in eache ranke, so youre battell of pikes
is proportionally lined every way. That don substracte the 540.
musketes the linenge shott of the two flankes fronte
and rerwarde oute of the principall number of shott whi-
che is 1500. and there shall reste 960. musketes whiche yo-
ue shall divide by 12. or into 12 troupes and the quo-
tiente of youre division alowethe 80. musketes in eache
troupe, whiche yove may double when occasion require (that don)
say that the reste of youre shott is divided into 12. troypes of 80. mul-
ketes in eache troupe to be divided on the two flankes of the battell of
pikes to squirmish in single or double file as occasion and situation
shall require, so al youre pikes and shot are divided, advertisinge that
the 22. pikes that did remaine oute of the division of the pikes are to
guarnish the coulores, as by the divisions folowinge youe may see.
Advertisinge that by reason no musketes did remaine oute of the di-
visions, youe are to cutt of one of the troupes 12. musketes to
guarnish the coulores whiche are not to be rekoned in the boddy of
the battell (but for borrowed) but where the divisions fauleth and
sheweth whiche is the righte way as here under youe see in the ta-
ble which is unfalible.

100
960 } 80
xxxi
xj

Table of the seconde battell.

42	126 m. 42 r. 3
7	126 m. 42 r. 3
294 p. 42 r. 7	144 m. 48 r. 3
294 p. 42 r. 7	144 m. 48 r. 3
294 p. 42 r. 7	80 m. 8 r. 10
294 p. 42 r. 7	80 m. 8 r. 10
294 p. 42 r. 7	80 m. 8 r. 10
294 p. 42 r. 7	80 m. 8 r. 10
294 p. 42 r. 7	80 m. 8 r. 10
22 p.	80 m. 8 r. 10
42	80 m. 8 r. 10
1786 p.	80 m. 8 r. 10
	80 m. 8 r. 10
	80 m. 8 r. 10
	80 m. 8 r. 10
	80 m. 8 r. 10
	80 m. 8 r. 10
	1500 m.
	1786 p.
	3286.

	<i>Pikes.</i>	<i>Musketes.</i>	<i>Souldieres.</i>
Borgonones.	— 847	— 694	— 1541.
Valones.	— 939	— 686	— 1625.
	1786	1380	3166.

THE THIRDE BATTELL.

NOwe to frame the thirde Battell of the 3166. men the Borgonones and Valones gave in relation meaninge 1786. pikes, and 1380. musketes, firste take the propounded number of pikes, whiche is 1786. oute of whiche take the square roote, whiche yove shall finde to be 42. soe that 42. is the fronte and flanke of the battell, and 22. pikes, remaininge whiche shall serve to guarnishe the culoures.

Put in case that occasion requirethe that youre linenge shott is to be no more then 3. musketes in ranke, and say that 42. rankes of 3. musketes in eache ranke shall guarnishe the righte flanke of the battell of pikes, and juste so many more for the linenge of the leifte flanke, whiche two linenges makethe 252. musketes, that don take 42. the fronte of the pikes, and ad therunto 6. the linenge shott of the two flanks, whiche two aditiones will make 48. To guarnishe the fronte of youre battell of pikes, say that the thirde division of shott is 48. rankes of 3. musketes in eache ranke, and juste so many more rankes for the linenge shott of the rerewarde of the battell of pikes, observinge the self same order as dothe the thirde division of shott, meaninge 148. rankes, of 3. musketes in eache ranke, whiche two divisiones for the linenge shott of the fronte and rerewarde makethe 288 musketes, and soe the 4. sides of youre battell of pikes are proportionally lined every way, the foure linenges importheth 540. musketes.

Tha: don substraete 540. musketes oute of the full number of shot whiche is 1380. and there shall remaine 840. musketes, whiche yove shall divide as time occasion or situation shall require: whiche nowe i suppose conveniente to be divided into twenty troupes to be divided on the two flanks of the battell of pikes to skirmishe where occasion shall require in single or double fiele, as the situation shall permitt, and the occasion shall require, at 42. musketes, in eache troupe, soe
all

all youre shott and pikas are divided, as before declared; Advertisinge that the culoures shall marche in the center guarnished withe the 22 pikes, that did remaine in the division of the pikes, and by reason no shott did remaine oute of the divisions of youre shott yove may take 12. shott oute of the laste division of shott to guarnishe the culoures, soe youre three battelles are framed, and by the figure folowinge youe see howe oute of there divisions they fall into battell. Greate consideration and curiosity is to by vnderstoode for the severall divisions of shott, as tyme and occasion shall require, alwayes consideringe the situation and disposition of the ground, as also of the severall occasions and advantages in skirmishenge withe greate or smale troupes withe single or double file and in whate distance (when, the enemy dothe abounde on horse, and when nott) and also in preventinge in due time the orderes and stratageames of the enemy.

Let none by ignorante that when in the divisions of pikes and shott their resteth not inough to guarnish the culoures, of force the necessary shott and pikes required for that purpose are to be cutt of the winges or troupes of the flankes, and are to be rekened where their firste divisions did fall, as declared in the table of the battelles for if youe reken them in the battell and where their firste division did fall, it can not confronte with the divisions, so observe still the rule of the divisions as set downe and declared in breefe in the table of the battelles, which is the righte way and generall rule. This table is newlie invented for that purpose, where presentlie withoute any paines or trouble youe shall finde the reasones, and proportion of all the divisions of the batteles in breefe (as well of the shott as of the pikes) as also whate remaineth oute of the divisions, whiche table is of rare importance for the breefe explicatinge and orderinge of all the divisions of battelles. And besides for cause that many auctores do leaue the same in obscuritie to avoide prolixity, as also to disperse the ingeniouslye understandinge of those of perfection in this arte.

Table of the thirde battell.

Pikes contained in the boddy of the battell.	_____	1764 pikes.
Pikes remaininge to guarnish the culors.	_____	022 pikes.
Lininge shott of the righte flanke.	_____	126 musketes.
Lininge shott of the leifte flanke.	_____	126 musketes.
Lininge shott of the fronte of the battell.	_____	144 musketes.
Lininge shott of the fronte of the rergarde	_____	144 musketes.
Musketes divided into 20. troupes on the		
flankes of the battell.	_____	828 musketes.
Musketes deducted to guarnish the colours.	_____	012 musketes.
		<hr/>
		3166 men.

Aqua.

the battell of pikes are also lefte iuste so many more. Whiche shall
observe the self same order in linenge the leifte flanke of the pikes.
P Imeane

OF MEN.

Fronte of the firste Battell.



60 m.



60 m.



160 m.



60 m.



60 mJ



60 m.]



74 m.

Third Battell.



80 m.



80 m.



Fronte of the thin



42 m.



42 m



142 m.



42 m.



42 m.



60 m.

74 m.

Third Battell.

142 m.

42 m

142 III

 142π

142 D

142 D

142

42

142

142

576 pikes
540 musketes.

3 1116.

A Squadron square of ground of 1116. souldieres of the whiche 576. are pikes, and 540. musketes, to reduce them into a perfecte squadron square of grounde firste take the propounded number of pikes whiche is 576. whiche youe shall multiply by 3. the produete wherof will be 1728. this produete divide by 7. and the number in the quotient will be 246. oute of this 246. take the square roote whiche will be 15. and say that youe founde oute the flanke of the battell of pikes, nowe to finde oute the fronte of the battell, take the propounded number of pikes whiche was 576. whiche youe shall divide by 15. the flanke, the quotiente wherof will be 38. whiche is the fronte of the battell of pikes and there resteth 6. pikes whiche shall serve to guarnish the coulours, so that 38. is the fronte and 15. the flanke. Nowe for the division of youre 540. musketes firste say that for the girdelinge shott of the righte flanke of the battell of pikes muste marche 16. rankes of 5. musketes in eache ranke comprehended the ranke of the culors, so the firste division of shott of the vangarde is divided into 16. rankes of five musketes in each ranke. And the seconde division of shott of the vangarde and firste winge of the right flanke of the battell of pikes is divided into 19. rankes of 5. musketes in each ranke. The thirde division or winge of the vangarde is also divided into 19. rankes of 5. musketes in each ranke whiche shall serve for the seconde winge of shott of the vangarde and righte flanke of the battell of pikes, so that 270. musketes, the iuste hault of the propounded number of shott, are comprehended in the saied 3. divisiones of shott of the vangarde and righte flanke of the battell of pikes.

And for the girdelinge shott and two winges of the leifte flanke of the battell of pikes are also lefte iuste so many more. Whiche shall observe the selfsame order in linenge the leifte flanke of the pikes.

P

Imean

576
3
3451
1728 } 246.
777

15(21
246
—
15

38
22(6
576
222 } 38.
5

16
5
80 m.

19
5
95 m.

19
5
95 m.

Imeane 16. rankes of five musketes in eache for the girdelinge shott of the leifte flanke of the battell of pikes and 2. flives, of 19. rankes of 5. musketes in eache ranke, in whiche 6. divisiones are comprehended the full number of shott whiche was 540. musketes advertisinge that the firste three divisiones of shott shall marche before the pikes, and the other three divisiones of the rergarde and leifte flanke shall marche after the pikes, as by the divisiones folowinge set downe in brife and shall be better understoode by suche as are not experte in this arte: so that they may the sooner cōceiue and come tounderstande these divisiones, and howe oute of there marche they fall into battell with the grace and brevity withoute any crossinge confusion or breakinge of rankes as many do, whiche are not expert in aritmetike nor in the severall sortes of divisiones of firy weapone.

The firste division of shott and firste winge of the vangarde is divided into 19. rankes of five musketes in eache ranke whiche conteines. ———

95 musk.

The seconde winge and division of the vangarde is divided into 19 rankes of five musketes in eache ranke. ———

95 musk.

The thirde division of shott of the vangarde for the girdelinge shott of the righte flanke of the battell of pikes is divided into 16. rankes of five musketes in eache ranke comprehended the ranke of the coullores. ———

80 musk.

After the above 3. divisiones of shott of the vangarde shall marche the firste division of pikes of 15. rankes of 10. pikes in eache ranke. ———

150 pikes.

The seconde division of pikes is also divided into 15. rankes of 10. pikes in eache. ———

150 pikes.

The thirde division of pikes Idem. ———

150 pikes.

The fourthe division of pikes is divided into 15. rankes of 8. pikes in eache ranke whiche dothe cōtaine. ———

120 pikes.

Or the coullores did remaine. ———

006 pikes.

The firste division of shott of the rergarded that folowes the pikes and that shall line the leifte flanke is divided into 16. rankes of 5. musketes in eache ranke monted. ———

080 musk.

The seconde division and firste winge of musketes of the reregarde is divided into 19. rankes of 5. musketes in eache ranke whiche followes the girdlinge shott of the leifte flanke and conteines. ———

95 musk.

The

45

95 mins.

iii6.

576p.

540 m

22 rrt6.

- $$\begin{array}{r} 3 \times (6) \\ 77 = 9 \\ 7777 \end{array} \left. \vphantom{\begin{array}{r} 3 \times (6) \\ 77 = 9 \\ 7777 \end{array}} \right\} \begin{array}{r} 1(21 \\ \times 46 \\ \hline 5 \end{array}$$

570

376

19

1-45

951

100 19 0

—

10-5

80

16

3

—

10

65

19

5

95

5

1050 pikes

1732 musketes

2782

TO frame a Squadron square of ground of 2782. Souldieres of the whiche number 1050. are pikes, and 1732. musketes, to reduce this number into a Squadron square of ground, whiche the Spanniarde caulle *Quadro de terreno*, firste take the propounded number of pikes whiche is 1050. and multiply it by 3. the producte, wherof will be 3150. this producte divide by 7. and the number in the quotient will be 450. oute of this quotiente take the square roote whiche youe shall finde to be 21. and 9. remayninge, and say that 21. is the flanke of the propounded number of pikes. Nowe to finde the fronte of the battell take the full number of pikes, whiche is 1050. whiche youe shall divide by 21. the flanke, and the quotient will be 50. and remainethe nothinge, and say that 50. is the fronte of the battell of pikes, and 21 the flanke.

Nowe for the division of youre shott suppose that youe woulde have the lininge shott not to contayne more then 4. in ranke, and that youe woulde have the battell of pikes, to be proportionally lined every way withe shot. To wourkethe whiche, take 21. the flanke of the battell of pikes, and multiply it by 4. the producte wherof will be 84. and say that the firste division of shott is 84. musketes or 21. rankes of 4. musketes in each ranke, whiche is the lininge shott of the righte flanke of the battell of pikes, and the seconde division of shott for the lininge of the leifte flanke shall contayne juste so many more, nowe to finde oute the nūber of shott that shall be in proportion to guarnish the full fronte of the battell of pikes and of the two linenges, ad to 50. the fronte of the propounded number of pikes 8 the number of shott of the two linges whiche two aditiones will make 58. and say that 58 rankes of 4. musketes in each ranke shall be the guarnison, or lininge shott of the fronte of the battell of pikes, and of the 2 linenges, and juste so many

1050

73

3150

777

21(9

450

21

50

21

50

100

1050.

21

4

84m.

84m.

68m.

ny more for the guarnison of the rereward of the battell of pikes, meaninge as before declared 58. rankes of 4. musketes in eache ranke, so the two flankes fronte and rereward of the battell of pikes is proportionally lined every way with 640. musketes, and resteth 1092. musketes whiche I divide into 22. troupes or maniples, ordered and divided in the fronte, rergarde, and 4. angles of the battell of pikes, to skirmishe eyther in single or double fiele as tyme occasion and situation shall require, and permitt; all whiche divisiones youe may see by the figure folowinge, for the divisiones of shot let none be ingnorante but that there are many considerations, and curiosities to be had as time and occasion shall require, and especially if the enemy be superior on horse.

58
4
—
232 m.
232 m.
—
464 m.
168 m.
—
632 m.
—

Hire folowethe who the full number of pikes and shott is divided into 31. divisiones and who oute of theyre marche they fall into battell.

THe firste division of shott that lines the righte flanke of the battell of pikes is 21. rankes of 4. musketes in eache ranke.

84 musk.

The seconde division of shott for the linenge shott of the leifte flanke of the battell of pikes iuste so many more 21. rankes of 4 muskets.

84 musk.

The thirde division of shot that guarnisheth the full fronte of the battell and 2. lininges is 58. rankes of 4. musketes in eache ranke.

232 musk.

The fourthe divisiō of shott that dothe guarnishe the rereward of the battell of pikes and 2. lininges is 58. rankes of 4. musketes in eache ranke.

232 musk.

22. maniples of 50. musketes in eache, devided on the fronte rergarde, and 4. angles of the battell make the.

1100 musk.

Advertisinge that of one of the troupes of musketes on the angles of the battell are to by taken 8. musketes which wantes to guarnish the culoures be reason no musketes did remaine in their laste division, also be reason no pikes did reste in the division of the pikes y cut 21. pikes of the flanke to guarnishe the culoures so the fronte of the battel of pikes shall

1732 musk.

shall by but 49. pikes. And by reason the divisions are before shut
 upp thies 8 musketes difereth in the rekoninge, so that when acon-
 v eniente number of pikes and shott doe not remaine oute of the di-
 vifiones suficiente to guarnish the culoures the above observation
 mu ste be kepte as ordered in the Table of the battell, so to confronte
 the divisions with the propounded number yove are to by informed
 by the table for bienge infallible.

A SQUAD

945 pikes.
1080 musketes.
2025 men.

A Battell of 2025. Souldieres divided into five battelles square of ground, of the whiche number 945. are pikes, and 1080 musketes whiche are equally divided into five battelles, and proportionally lined with the propounded number of shott whiche is 1080. musketes as the divisions and figure followinge shewethe.

To worke the whiche firste take the propounded number of pikes whiche is 945 and divide it into five partes or by five, and the number in the quotiente will be 189. whiche is the iuste number of pikes youre division yealdethe for eache battell of the five, nowe to finde oute the fronte, and flanke of eache battell take 189. pikes whiche youre division allowethe for eache battell of pikes, and multiply the same by 3. the producte wherof will be 567. this producte divide by 7. and the number in the quotient will be 81. oute of this 81. the quotiente take the square roote whiche will be 9. and say that 9. is the flanke of eache one of the five battelles of pikes, nowe to finde the fronte take the propounded number of pikes whiche youre division did allowe to eache battell of pikes whiche was 189. this 189 pikes divide by 9. the flanke, the quotiente wherof will be 21. and nothinge remayninge, and say that 21. pikes is the fronte, and 9 the flanke of eache battell of pikes before spoken of and when yove will have them fall into squadron lett them marche in 3. maniples of 9. rankes of 7. pikes in eache ranke with the coulors in the center of the midel maniple, and so shall they fall with grace and brevity into battell, and withoute any crossinge or confushion. To guarnishe the coulors yove may cutt nine pikes of the flanke of eache battell, and so shall the fronte containe but 20. pikes; nowe for the division of the propounded number of shott whiche was 1080. musketes suppose that yove woulde have eache battell of pikes to be proportionally lined allowinge 3 musketes under the shelter or defence of the pike, firste say that the firste division of shott that shall girdel the right flanke of the firste battell of pikes shall containe 9. rankes of 3. musketes in eache ranke, and iuste so many more for the girdelinge shott of the leifte flanke, so is the 2. flankes of the battell of pikes guarnished: Nowe to guarnishe the fronte

$$\begin{array}{r} 0 \\ * 00 \\ 945 \overline{) 189} \\ 945 \end{array}$$

$$\begin{array}{r} 189 \\ 3 \overline{) 567} \end{array}$$

$$\begin{array}{r} 00 \\ 81 \overline{) 729} \\ 729 \end{array}$$

$$\begin{array}{r} 00 \\ 189 \overline{) 21} \\ 189 \end{array}$$

of the battell of pikes with the shott say that 21. is the fronte of the battell of pikes, and adinge thereunto the two linings it makethe 27. and say that the third division of shott is to marche with the 27. rankes of 3. musketes in eache ranke, whiche shall guarnishe the full fronte of the battell of pikes, and two linings; Nowe the two flâkes and fronte of the battell of pikes are guarnished, and guarnish the rerwarde of the battell of pikes observe the self same order as yove did in guarnishinge the fronte of the battell of pikes whiche was 27. rankes of 3. musketes in eache ranke, so youre battell of pikes is proportionally lined every way as before declared. The selfe same order shall by observed for the linenge, and girdelinge shott of the other foure batteles of pikes as more plainly shall appeere by the divisiones and figure folowinge

The firste division of shott that dothe guarnishe the righte flanke of the battell of pikes is divided into nine rankes of 3. musketes in eache ranke. ———

27 musk.

The seconde division of shott that guarnisheth the leifte flanke of the battell of pikes shall observe the self same order. ———

27 musk.

The thirde division of shott that shall guarnishe the full fronte of the battell of pikes, and of the two linenges is divided into 27. rankes of 3. musketes in eache ranke monted. ———

81 musk.

The fourth division that dothe guarnishe the rerwarde of the battell of pikes shall observe the self same order I meane 27. rankes of 3. musketes in eache ranke. ———

81 musk.

By the above mentioned foure divisiones yove see who the firste battell of pikes is proportionally guarnished with the shott, whiche 4. divisiones makethe 216. musketes, and the self same order shall be observed to guarnishe eache one of the other foure battelles of pikes whiche makethe up 1080 musketes the propounded number for the five batteles, as yove may plainly see by the figure folowinge howe they fall oute of there marche, and divisiones into battell as before declared, advertisinge that in the divisiones of the pikes and shott there did remaine nothinge.

216 musk.

5

1080 musk.

27 2025.

[illegible][illegible][illegible]

P P P P P P P P P P P P P P

A 10x10 grid of 100 small images, each showing a different combination of the letters 'P' and 'R' in a stylized, blocky font. The letters are arranged in a repeating pattern across the grid.

Divisiones of the firste Battell: Firste division is 9. r. of 7. pikes. 63 pikes.
 Seconde division. Idem. 63 pikes.
 The thirde division. Alsoe. 63 pikes.

189 pikes.
5.

Lininge shott of the righte flanke of the firste battell of pikes, 9. rankes of musketes in each ranke,

945 pikes.

27 musk.

27 musk.

8 i musk.

81 musk.

945 musk.
1080 pikes.

2025 men.

216 musk.
5.

1080.

Advertifinge that no pikes nor shot did remaine oute of the divifiones to guarnishe the culoures, so that one ranke of pikes and shott may by cutt all a longeste, the fronte or flanke of each battell to guarnish the culoures.

of the battell of pikes with the shott say that 21. is the frōte of the battell
 of pikes, and adinge thereūto the two lininges it makethe 27. and say
 that the backe of the battell is to marche with the 27. rankes of 3. mus-

ketes

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battle

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pikes

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there

D I S C I P L I N E.

127

Consideringe that crosse battelles are of wonderful force as well
 aganiste horse as foote as also for the safegarde of baggage amu-
 nitiones, and hurteme: I thoughte necessary to put downe the ru-
 le for the framinge of suche sorte of battelles, put in case that youe
 have 2032. souldieres of the whiche 1000. are pikes and 1032. are
 musketes and that youe would have this number divided into foure
 battelles of broad fronte proportionally lined every way with the
 propounded number of shott. To worke the whiche firste take the
 number of pikes whiche is 1000. and divide the same by 4. or into foure partes
 and the quotiente will be 250. whiche is the number of pikes that youre
 division yealdeth for each of the 4. battelles of pikes; now to frame
 the firste battell take 250. pikes, and divide the same by 3. the quotient
 will be 83. of whiche 83. take the square roote which is 9. and say that 9.
 is the flanke of the battell, now to finde oute the fronte take 250. the
 number of pikes and divide the same by 9. the flanke, the quotient will
 be 27. and 7. pikes remayninge, and say that 27. is the fronte and 9. the
 flanke, and 7. pikes remayninge: so youe finde oute the fronte and flanke
 of each battell of the 4. and 7. pikes remayninge in each battell whiche
 shall serve to guarnishe the coulours, now for the division of youre
 shott take the propounded number of shott whiche is 1032. musketes,
 and divide the same by 4. or into 4. partes and the number in the
 quotiente will be 258. whiche is the iuste number of shott youre
 division yealdeth for each battell of the 4. of pikes: that done take
 the number of pikes, and shott that each battell dothe containe,
 whiche is 508. this full number, divide by 3. the quotient wherof
 wilbe 169. oute of whiche take the square roote which will be 13.
 the flanke: now to finde the fronte of the full number of pikes and
 shott take 508. and divide it by 13. the flanke, and the quotiente
 will be 39. and 1. remayninge now take 10.

Q

the

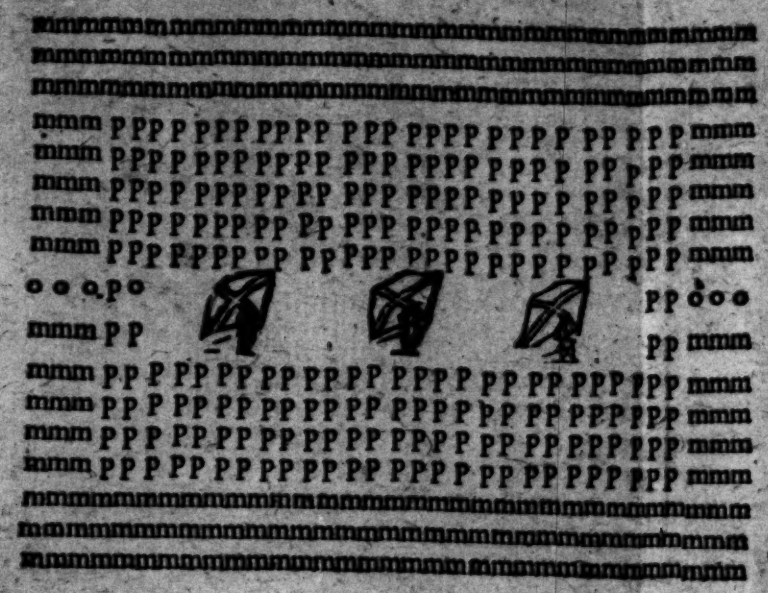
the flanke of the pikes comprehendinge the linenge of the culors, and substracte it oute of 13. the laste flanke of the full number of pikes and shott and there shall remaine 3. and say that the firste division of shott shall marche withe 10. rankes of 3. musketes in eache ranke whiche shall serve for the girdlinge shott of the right flanke of the firste battell of pikes, and iuste so many more for the linenge shott of the leifte flanke, so the two flankes of the battell of pikes are lined. nowe to guar-nishe the fronte of the battell of pikes, ad 6. the 2. li-nenges to 17. the fronte of the pikes whiche two aditio-nes make the 33. and say that the thirde division of shott shall marche withe 33. rankes of 3. musketes in eache ranke, and iuste so many more rankes of musketes shall marche to guarnish the rerewarde of the battell of pi-kes, and two linenges, so the foure sides of the battell of pikes are proportionally lined every way, and the selfe same order shall be observed for the divisiones of eache battell of the other three as the figure and divisiones followinge sheowethe, theese cross batte-les are esteemed to be of wonderfull force, consideringe well the fra-minge of them, and they are also of wonderfull safegarde for the ba-gage, amunitiones and hurtemē, and if the enemy do come to charge on the firste battell or on any of the other outewarde batteles, whiche beinge alone are but of litle force, but the two outewarde batteles marchinge uppon bothe sides of the firste, then it is of triple force, and if the enemy doe charge on the rerewarde of the two alone bat-teles they close to gither, and are of double force, and if the enemy be stronge on horse, and shoulde charge at once on the fronte and re-reward then the bagage and hurtemen are to marche betwexte the two double batteles, of the uangarde and rerwarde and cut so many pikes as shall guarnish the same on bothe sides to kepe of the fury of the horse, so it is guarished every way as the divisiones and figure fo-lowinge sheowethe, by reason the culoures are doble lined and that yove muste cut 6. musketes for eache battell in the rekeninge shall di-fer so many, it importeth nothinge be reason yove are to observe the generall rule of the table whiche is infallible.

13
10
3

33
3
99

1000 pik.

Fronte of the firste Battell.

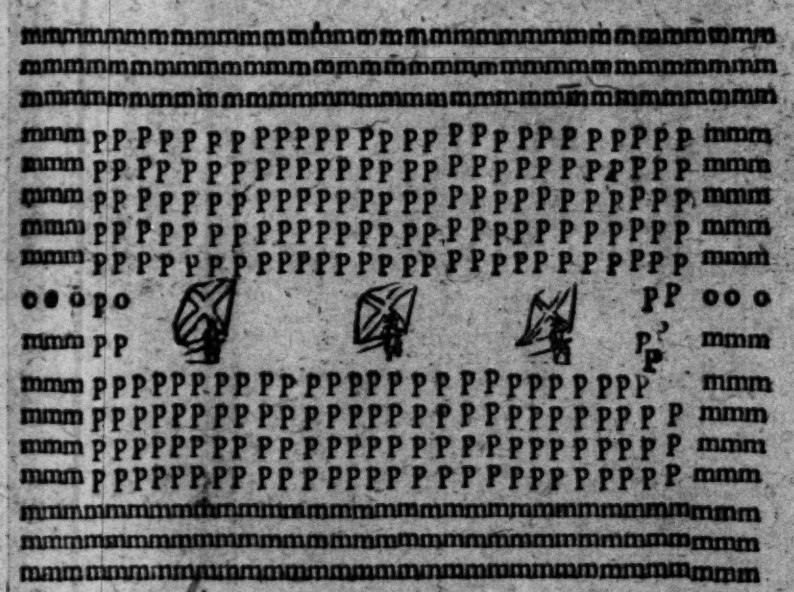


1000 pikes.
1032 musketes.

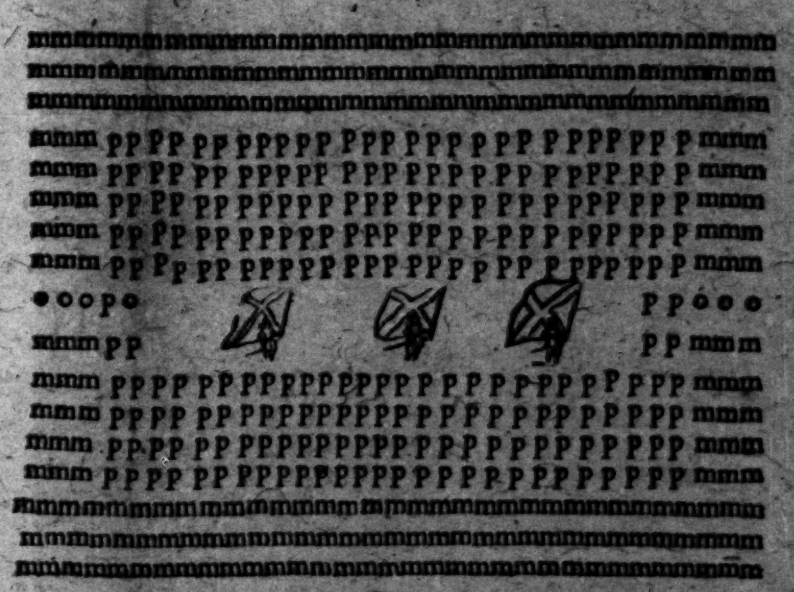
3 - 1 - 2032.

250.
9 flank.
27 front.

Fronte of the thirde Battell.

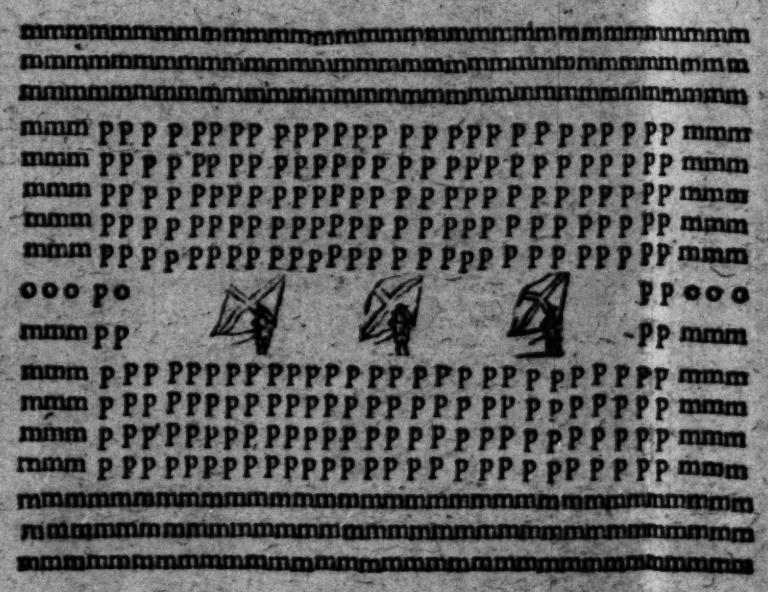


Fronte of the seconde Battell.



27
9
243
7
250
10
3
30
10
3
30
33
3
99
33
3
99
30m.
30m.
99m.
99m.
258m.
4m.
1032m.
27
9
243
7
250
4
1000p.
258.

Fronte of the fourthe Battell.



BY reason that by the divisions the conveniente number of shott did not reste for the lininge of the coulours, the 6. shott that wantes for that purpose in each of the foure battelles, are to by taken oute of some of the divisions; soe that thies 6. musketes borrowed shall difer But for not to err in the rekeninge alwayes observe the 11. of the divisions as set downe in the Table, for beinge infalible) and that moste comonly to muche or to litle pikes, and shott are wonte to remaine for the lininge of the coulours, soe that the firste divisions ordered in the Table, is the righte way, for otherwise suche as are not curiouse and of rare judgements can not chuse but err

1000 pik.

the

and it will be 32. and it remains now take 10.

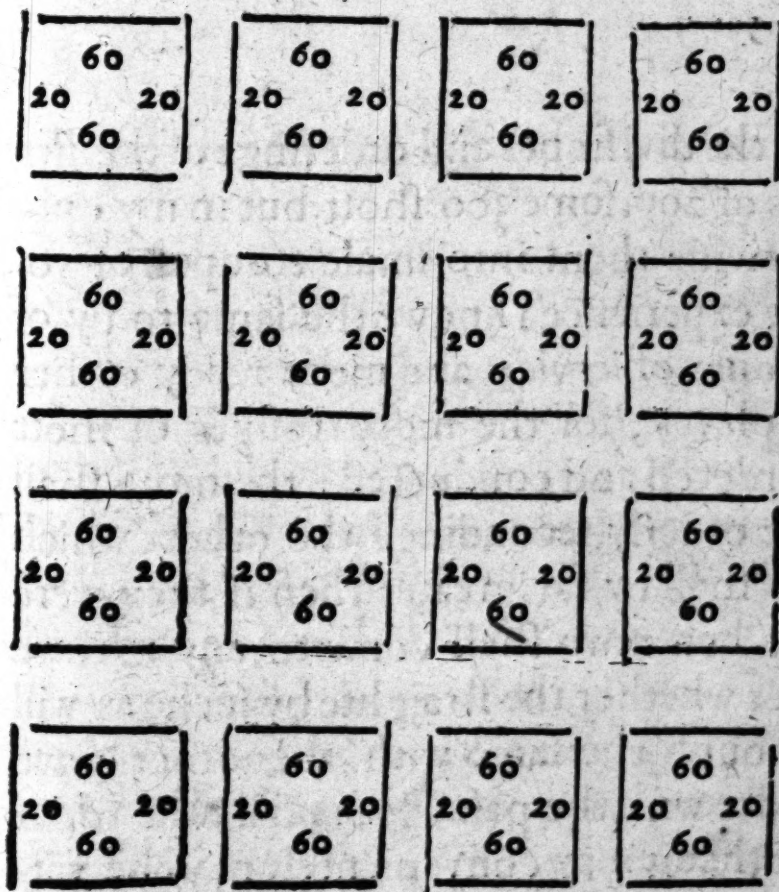
1000 pik.

S Everall orderes are used for the repartinge and prudente orderinge of an army into sundry battalones, as the occasions and judiciousse intendimente of the prudente and brave Comaunder shall finde conveniente, in devidinge them into 3. 6. 8. 12. or 16 battalones, whiche with facilitie are ordered by the prudente and experimented Sardgente mayor.

An army of 19200. divided into 16. battalones of broade fronte, bienge divided by 16. eache battell shall containe 1200. whos fronte is 60. and flanke 20. as by the figures folowinge yove see ordered.

The army divided into 16. battelles of broade fronte.

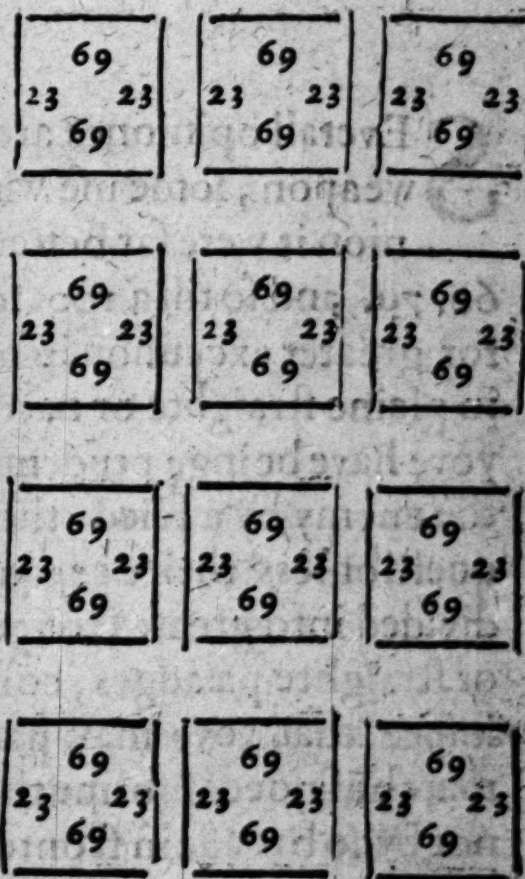
16. BATTELES.



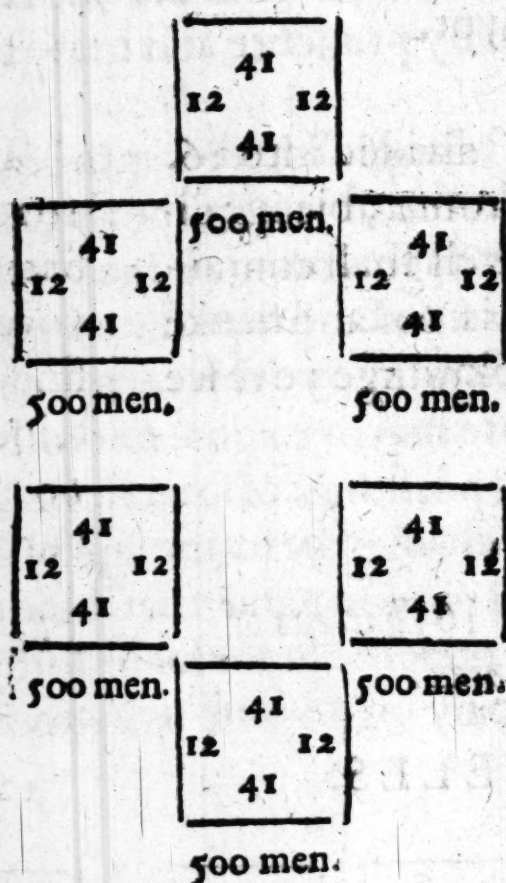
The selfe same army of 19200. is divided into 12. battalones of broade fronte: yove shall by youre division finde each battalon to containe 1600. whos fronte is 69. and flanke 23. as the figures folowinge sheoweth.

The army divided into 12 battelles of broade fronte.

12. BATTELES.



Three thousande men divided into six battelles of broade fronte ordered to fighte, as by the figure followinge yove see, the fronte of each battell is 41. and flanke 12. and 8. remaininge in the divisions of each battallon.



Everall opiniones are for the divisions and orderinge of the fry weapon, some use winges of 200. some 300. shott, but in my opinion it were far better to divide them into smale troupes of 50. 60. 70. and so till a 100. for by experience i knowe the same to by of for greater execusion in ocaiones of service, and more ready eyther in plaine straichte or narowe places, for the more troupes of shott yove have beinge prudently ordered and conducted, the more shall the enemy by a plied, the one orderly secondinge the other, which questionless their execution shall by far greater then if they were divided into greate troupes. When yove shall come to any narowe or straichte pasadges, consider whether the straichte by suche as will suffice that yove may pass trough the same with the order yove march, if not conforme the order with the pasadge, and let the order not by so broade in fronte but that it may conveniently marche withoute breakinge order or array, nor leshe then the thirde parte of the fronte of the battell of pikes, if the situation so permit; for cause

se thatt all prevenfiones pofible to be had for the breefe framinge of battelles are to by more eſteemed, rather then fall abreakinge often times order and array, as very many unable Sardgente mayores commonly do, but rather prudently with grace and brevitie, and without any croffinge or confuſion or breakinge of any ranke fall into battell, thies and many more difficulties are with facilitie reduced into theire iuſte perfection by prudente and brave conductores, and with grace and brevitie.

The rule to frame triangle battelles is to begin withe one man in the firſte ranke, 3. in the ſeconde, 5. in the thirde, ſeven in the fourth, and ſo conſequently augmentinge 2 in every ranke untill youe finiſh youre battell, this unuſed propoſition i put downe to contente thoſe whiche woulde faine knowe the forme of ſuche battelles, and biſides that a Sardgente mayor oughte not to by ingnorante in any maner of forme or propoſiones of ſquadrones, and that withe facilitie and ſpeede he may change the forme and propoſition, as time ocaſion and ſituation ſhall require, and that biſides ocaſion may offer that ſituation ſhoulde preſente fit for ſuche formes, ſo that a Sargente mayor oughte not to by ingnorante in no forme of ſquadrones.

m
mm
mmm
mmmm

Fronte.

m
mm
mmm
mmmm

PPPPPPPPPPPP
PPPPPPPPPP
PPPPPPPP
PPPPPP
PPPP
PPP
P

m
mm
mmm
mmmm

Q3

A Bat-

1930 pikes.
4070 musk.

3--1--6000 men.

A Battell of broade square of 6000. men of the whiche 1930. are complet corseletes and 4070. musketers, ordered and divided as folowethe: first take the propounded number of pikes whiche is 1930. this number divide be 3 the quotiente wherof will by 643. oute of this quotiente take the square roote whiche will by 25. whiche is the flanke of the battell of pikes. That don to finde oute the fronte of the battell take the propounded number of pikes, and divide the same by 25 the flanke; whiche quotient wil by 76. and 30. pikes remaininge, and say that 76. is the fronte and 25. the flanke of the battell of pikes, and that the 30. pikes shall be to guarnishe the coulours, nowe for the division of the 4070. musketes put in case that yove woulde have the battell to be proporsionally lined every way with the shott, consideringe that five shott is the moste that can be conueniently defended under the shelter or defence of the pike, and say that yove will have the battell to by guarnished with the five musketes in ranke, to wourke the whiche take 27. the flanke comprehended: the two rankes of the coulours and say that the firste division of shott is 27, rankes of five musketes in eache ranke whiche is the girdelinge shott of the righte flanke and iuste so many for the linenge of the liefte flanke, nowe to finde oute the shott that shall guarnishe the full fronte of the battell of pikes and the two linenges, take 10. the linenges of the two flanks, and adit to 76. the fronte whiche two aditiones makethe 86. and say that the guarnision of shott of the fronte of the battell of pikes, and two linenges shall marche with the 86. rankes of five musketes in eache ranke; nowe for the linenge shott of the rerewarde of the battell of pikes observe the self same order meaninge 86. rankes of five musketes in eache ranke, so the two flanks, fronte, and rerwarde of the bat-

$$\begin{array}{r} 1930 \\ 3 \overline{) 1930} \\ \underline{333} \\ 333 \\ \underline{333} \\ 0 \end{array}$$

$$\begin{array}{r} 1930 \\ 25 \overline{) 1930} \\ \underline{500} \\ 930 \\ 750 \\ \underline{180} \\ 30 \end{array}$$

$$\begin{array}{r} 76 \\ 25 \\ \hline 380 \\ 1520 \\ 3 \\ \hline 1930. \end{array}$$

$$\begin{array}{r} 27 \\ 5 \\ \hline 135 m. \end{array}$$

$$\begin{array}{r} 76 \\ 10 \\ \hline 86 \\ 5 \\ \hline 430 m. \end{array}$$

tell

tell of pikes is proportionally lined whiche 4. divisiones of shott make the 1130 musketes nowe for the division of the reste of the shott substraete 1130. the 4 lininges oute of 4070. musketes the principall some, and there shall reste 2940. musketes whiche can not come under the shelter nor defence of the pikes, whiche i divide into 40. maniples of 74. musketes in eache maniple, exepte one troupe that conteines but 54. musketes whiche i divide on the flankes of the battell of pikes to skirmishe in singell or double fiele as tyme, ocasion, and disposition of the ground shall permit, so all youre shott are divided as before set downe, and as by the divisiones, and figure folowinge ordered, and howe oute of there marche they fall into Squadron advertisinge that the coulours shall marche in the center and midele maniple of pikes, and the 30. pikes that remaine the for to guarnishe the coulors shall also marche in the same maniple all whiche divisiones are plainly ordered as by the figure folowinge yove may see, who oute of there marche they fall into battell withe grace and brevity, in observinge the divisiones ordained when of a sodaine yove woulde have the pikes oute of there marche to fall withe grace and brevity into battell, cause the firste division of pikes to marche withe 25. rankes of 16. pikes in eache ranke, then another maniple of 25. rankes of 15. pikes in eache ranke, then another maniple withe the self same order withe the coulours in the center guarnished withe the 30. pikes that did remaine, after the maniple of the coulors shall marche two other maniples of 15. rankes of 5. pikes in eache ranke as here folowēge yove shall see.

The firste division of pikes is divided into 25. rankes of 16. pikes in eache ranke maketh.

The seconde division of pikes is divided into 25. rankes of 15. pikes in eache ranke whiche shall folowe the firste monted.

The thirde division in whiche center the coulours are to marche is divided into 25. rankes of 15. pikes in eache ranke and dothe conteine in all the some of.

The fourthe division and maniple of pikes is divided into 25. rankes of 15. pikes in eache ranke whiche dothe conteine.

235 m.
135 m.
430 m.
430 m.

1130 m.

4070 m.
1130 m.

2940 m.

74 m.
39 troupes.

866
212

2886 m.
54 m.

2940 m.

400 pik es.

375 pikes.

375 pikes.

375 pikes.

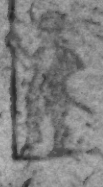
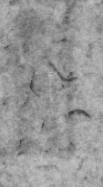
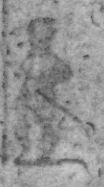
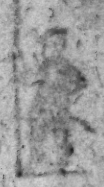
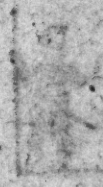
The

The fiftie and laste division also.

And 30. pikes that did remaine for the coloures.

FOr the framinge of batteles bastarde square whiche the Spaniarde and Italian call *prolongado*, that is to say longe in flanke, the rule whiche is used for the framinge of theese sortes of batteles is the self same of the broade square, and the difference is, that the fronte of the one is flanke of the other, as for example suppose yove woulde have a battell bastarde square to be framed of 700. pikes. To wourke the whiche, do as yove did in framinge the batteles of broade fronte, in dividinge the saied number of 700. pikes by 3. the quotient wherof will be 233. oute of whiche quotiente take the square roote whiche will be 15. whiche is the fronte of the bastarde square, nowe to finde the flanke take 700. the propounded number of pikes, and divide the same by 15. the fronte, the quotient wherof will be 46. the flanke of the bastarde square, and resteth 10. pikes. And if of this self same number of 700. pikes yove woulde frame a squadron of broade square the flanke of the bastarde square will be by the fronte of the broade square, so that the rule whiche is used for the one will serve for the other. The difference is that the fronte of the one wil serve for the flanke of the other.

No

This image shows a blank, aged, cream-colored page, likely an endpaper or flyleaf from an old book. The paper has a slightly textured appearance with some minor discoloration and faint horizontal ruling lines. There is no text or other markings on the page.

The image is a dark, heavily textured scan of a document page, possibly a book cover or endpaper. It is characterized by a dense, grainy appearance with numerous small, light-colored specks and larger, irregular dark patches scattered across the surface. The overall color is a mottled grey-brown. There are faint, illegible traces of text or markings, particularly in the upper half, which appear as lighter, more uniform areas against the darker background. The texture suggests a material like aged paper or a book binding that has been subjected to significant wear, aging, or perhaps a poor quality scan.

1070 msk

FRONTE OF T

[illegible]

Pikes remaining

30 pikes.

Advertisinge that the 20 musketes for the lininge short of the culoures are com
cut of the laste troupe on the liefte flanke, whiche troupe remaines with 54 mus

34X-6000.

[illegible]

27 rankes of 5 musketes.
27 rankes of 5 musketes.
86 rankes of 5. musketes.
86 rankes of 5 musketes.
50 troupes conteininge

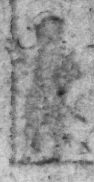
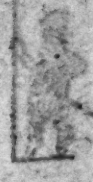
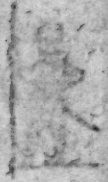
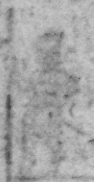
135 musketes.
135 musketes.
430 musketes.
430 musetes.
2940 musketes.

4070 musk.

comprehended in the divisions of the lining shot of the two flanks; which 20 muskees were musketes, and all the rest 74 musketes.

A SQUADRON OF THE

REGIMENT OF THE



THE FOLLOWING IS A LIST OF THE
NAMES OF THE SOLDIERS IN THE
SQUADRON OF THE REGIMENT OF THE
ARMY OF THE UNITED STATES OF AMERICA
WHO WERE KILLED IN ACTION DURING
THE WAR OF 1812.

NAME	RANK	COMPANY	DATE OF DEATH
ALLEN, JOHN	PRIVATE	1ST	SEPTEMBER 11, 1812
BROWN, JAMES	PRIVATE	2ND	OCTOBER 3, 1812
CLARK, WILLIAM	PRIVATE	3RD	NOVEMBER 15, 1812
DAVIS, ABRAHAM	PRIVATE	4TH	DECEMBER 27, 1812
EDWARDS, SAMUEL	PRIVATE	5TH	JANUARY 19, 1813
FISHER, BENJAMIN	PRIVATE	6TH	FEBRUARY 10, 1813
GILBERT, ROBERT	PRIVATE	7TH	MARCH 3, 1813
HARRIS, DAVID	PRIVATE	8TH	APRIL 25, 1813
HENRY, JOHN	PRIVATE	9TH	MAY 17, 1813
HUGHES, WILLIAM	PRIVATE	10TH	JUNE 9, 1813
JACKSON, ANDREW	PRIVATE	11TH	JULY 1, 1813
KELLY, THOMAS	PRIVATE	12TH	AUGUST 23, 1813
LEWIS, CHARLES	PRIVATE	13TH	SEPTEMBER 15, 1813
LYNCH, JAMES	PRIVATE	14TH	OCTOBER 7, 1813
MAHONEY, JOHN	PRIVATE	15TH	NOVEMBER 29, 1813
MCCARTHY, WILLIAM	PRIVATE	16TH	DECEMBER 11, 1813
MURPHY, JAMES	PRIVATE	17TH	JANUARY 3, 1814
NICHOLS, ABRAHAM	PRIVATE	18TH	FEBRUARY 25, 1814
OLIVER, BENJAMIN	PRIVATE	19TH	MARCH 17, 1814
PETERSON, ROBERT	PRIVATE	20TH	APRIL 9, 1814
ROBERTSON, DAVID	PRIVATE	21ST	MAY 1, 1814
SCOTT, JOHN	PRIVATE	22ND	JUNE 23, 1814
SMITH, WILLIAM	PRIVATE	23RD	JULY 15, 1814
STEWART, ABRAHAM	PRIVATE	24TH	AUGUST 7, 1814
TAYLOR, BENJAMIN	PRIVATE	25TH	SEPTEMBER 29, 1814
TELFORD, ROBERT	PRIVATE	26TH	OCTOBER 11, 1814
THOMAS, JAMES	PRIVATE	27TH	NOVEMBER 3, 1814
TOLSON, WILLIAM	PRIVATE	28TH	DECEMBER 25, 1814
TURNER, ABRAHAM	PRIVATE	29TH	JANUARY 17, 1815
WATSON, BENJAMIN	PRIVATE	30TH	FEBRUARY 9, 1815
WEAVER, ROBERT	PRIVATE	31ST	MARCH 1, 1815
WELCH, DAVID	PRIVATE	32ND	APRIL 23, 1815
WILSON, JOHN	PRIVATE	33RD	MAY 15, 1815
WOOD, ABRAHAM	PRIVATE	34TH	JUNE 7, 1815
WRIGHT, BENJAMIN	PRIVATE	35TH	JULY 29, 1815
YOUNG, ROBERT	PRIVATE	36TH	AUGUST 11, 1815
ZIMMERMAN, DAVID	PRIVATE	37TH	SEPTEMBER 3, 1815
ADAMS, JOHN	PRIVATE	38TH	OCTOBER 25, 1815
BAKER, WILLIAM	PRIVATE	39TH	NOVEMBER 17, 1815
CAMPBELL, ABRAHAM	PRIVATE	40TH	DECEMBER 9, 1815
CARR, BENJAMIN	PRIVATE	41ST	JANUARY 1, 1816
CARTER, ROBERT	PRIVATE	42ND	FEBRUARY 23, 1816
CHAMBERLAIN, DAVID	PRIVATE	43RD	MARCH 15, 1816
CLARK, JOHN	PRIVATE	44TH	APRIL 7, 1816
COLE, ABRAHAM	PRIVATE	45TH	MAY 29, 1816
COOPER, BENJAMIN	PRIVATE	46TH	JUNE 11, 1816
CORRIGAN, ROBERT	PRIVATE	47TH	JULY 3, 1816
CROFT, DAVID	PRIVATE	48TH	AUGUST 25, 1816
CURRY, JOHN	PRIVATE	49TH	SEPTEMBER 17, 1816
DALY, ABRAHAM	PRIVATE	50TH	OCTOBER 9, 1816
DANIEL, BENJAMIN	PRIVATE	51ST	NOVEMBER 1, 1816
DEAN, ROBERT	PRIVATE	52ND	DECEMBER 23, 1816
DEWEE, DAVID	PRIVATE	53RD	JANUARY 15, 1817
DICKSON, JOHN	PRIVATE	54TH	FEBRUARY 7, 1817
DODD, ABRAHAM	PRIVATE	55TH	MARCH 29, 1817
DOLAN, BENJAMIN	PRIVATE	56TH	APRIL 11, 1817
DONOHUE, ROBERT	PRIVATE	57TH	MAY 3, 1817
DUNN, DAVID	PRIVATE	58TH	JUNE 25, 1817
EDMONDSON, JOHN	PRIVATE	59TH	JULY 17, 1817
ELDER, ABRAHAM	PRIVATE	60TH	AUGUST 9, 1817
ELDER, BENJAMIN	PRIVATE	61ST	SEPTEMBER 1, 1817
ELDER, ROBERT	PRIVATE	62ND	OCTOBER 23, 1817
ELDER, DAVID	PRIVATE	63RD	NOVEMBER 15, 1817
ELDER, JOHN	PRIVATE	64TH	DECEMBER 7, 1817
ELDER, ABRAHAM	PRIVATE	65TH	JANUARY 29, 1818
ELDER, BENJAMIN	PRIVATE	66TH	FEBRUARY 11, 1818
ELDER, ROBERT	PRIVATE	67TH	MARCH 3, 1818
ELDER, DAVID	PRIVATE	68TH	APRIL 25, 1818
ELDER, JOHN	PRIVATE	69TH	MAY 17, 1818
ELDER, ABRAHAM	PRIVATE	70TH	JUNE 9, 1818
ELDER, BENJAMIN	PRIVATE	71ST	JULY 1, 1818
ELDER, ROBERT	PRIVATE	72ND	AUGUST 23, 1818
ELDER, DAVID	PRIVATE	73RD	SEPTEMBER 15, 1818
ELDER, JOHN	PRIVATE	74TH	OCTOBER 7, 1818
ELDER, ABRAHAM	PRIVATE	75TH	NOVEMBER 29, 1818
ELDER, BENJAMIN	PRIVATE	76TH	DECEMBER 11, 1818
ELDER, ROBERT	PRIVATE	77TH	JANUARY 3, 1819
ELDER, DAVID	PRIVATE	78TH	FEBRUARY 25, 1819
ELDER, JOHN	PRIVATE	79TH	MARCH 17, 1819
ELDER, ABRAHAM	PRIVATE	80TH	APRIL 9, 1819
ELDER, BENJAMIN	PRIVATE	81ST	MAY 1, 1819
ELDER, ROBERT	PRIVATE	82ND	JUNE 23, 1819
ELDER, DAVID	PRIVATE	83RD	JULY 15, 1819
ELDER, JOHN	PRIVATE	84TH	AUGUST 7, 1819
ELDER, ABRAHAM	PRIVATE	85TH	SEPTEMBER 29, 1819
ELDER, BENJAMIN	PRIVATE	86TH	OCTOBER 11, 1819
ELDER, ROBERT	PRIVATE	87TH	NOVEMBER 3, 1819
ELDER, DAVID	PRIVATE	88TH	DECEMBER 25, 1819
ELDER, JOHN	PRIVATE	89TH	JANUARY 17, 1820
ELDER, ABRAHAM	PRIVATE	90TH	FEBRUARY 9, 1820
ELDER, BENJAMIN	PRIVATE	91ST	MARCH 1, 1820
ELDER, ROBERT	PRIVATE	92ND	APRIL 23, 1820
ELDER, DAVID	PRIVATE	93RD	MAY 15, 1820
ELDER, JOHN	PRIVATE	94TH	JUNE 7, 1820
ELDER, ABRAHAM	PRIVATE	95TH	JULY 29, 1820
ELDER, BENJAMIN	PRIVATE	96TH	AUGUST 11, 1820
ELDER, ROBERT	PRIVATE	97TH	SEPTEMBER 3, 1820
ELDER, DAVID	PRIVATE	98TH	OCTOBER 25, 1820
ELDER, JOHN	PRIVATE	99TH	NOVEMBER 17, 1820
ELDER, ABRAHAM	PRIVATE	100TH	DECEMBER 9, 1820

75. m. 7. n.	
74. m. 7. n.	
73. m. 7. n.	
72. m. 7. n.	
71. m. 7. n.	
70. m. 7. n.	
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68. m. 7. n.	
67. m. 7. n.	
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44. m. 7. n.	
43. m. 7. n.	
42. m. 7. n.	
41. m. 7. n.	
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37. m. 7. n.	
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35. m. 7. n.	
34. m. 7. n.	
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20. m. 7. n.	
19. m. 7. n.	
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17. m. 7. n.	
16. m. 7. n.	
15. m. 7. n.	
14. m. 7. n.	
13. m. 7. n.	
12. m. 7. n.	
11. m. 7. n.	
10. m. 7. n.	
9. m. 7. n.	
8. m. 7. n.	
7. m. 7. n.	
6. m. 7. n.	
5. m. 7. n.	
4. m. 7. n.	
3. m. 7. n.	
2. m. 7. n.	
1. m. 7. n.	

No souldier (i hope) oughte to be ingnorante but that the Squadron of pikes being framed, it is to be empaled and girdeled withe shott as many rankes of shott as pikes. But the rigbte and naturall girdelinge shott indeede oughte to be no more shott in ranke, then that the pike may well cover and defende, especially where the enemy are stronge of horse, and so under the favor of the pike, there can nott conveniently be defended but one ranke of three or foure shott at the moste, and so many in my opinion shoulde the girdelinge shott containe and kneelinge upon one knee under the coverte of the couched pikes, shoulde at the charginge of the horsemen discharge there voley in there face, and bosome; whiche woulde be no smale gallinge unto them, butt when this danger of horse is not to be feared, then the impalement may be made of more shot in a ranke, acordinge to the quantity of shott, and the reste of the shott into smale slives or troupes to troupe rounde a boutte the battell in reasonable distance from the same, the whiche divisiones of smale troupes, i esteeme to be far better then the greate inproportionate winges, whiche many do use, containinge far greater numberes, and are muche more ready to be broughte to skirmishe eyther in single or double fiele, and every severall troupe to be led by a Sargente or Corporall, and some Captaines to oversee the whole, and at every angle of the battell it were not a misse to a pointe certaine troupes of shott, whiche woulde flanker itt every way even as the Cavallero or Travessos do the curtine of a forte.

Let none be ingnorante but that for the severall divisiones of pikes and shott is required greate considerationes, as time, occasion, and situation shall require; continuall application in the theoricke and practicke of warr together withe perfection in arithmeticke makethe easy many difficulties of deepe judgemente, and are importance in warlike affaires, all whiche cōtinuall use and exercice makethe easy, for the severall divisiones of shott many considerationes are to be had acordinge as occasion shall require, and the situation and disposition of grounde shall permitt, for the girdelinge shott some use three some 4. and five is the moste that can conveniently be defended under the shelter or defence of the pike, and specially when the enemy are stronge on horse, so that for the righte guarnision of shott oughte not to be more then the pike can defende, but in suche occasiones as the enemy is not to be feared on horse the divisiones of shot can be ordered of greater numberes to skirmishe, acordinge to the judgemente of the Sarge

gente mayor, dividinge them in wings or maniples, as he shall bincke moſte conveniente, obſervinge theyr juſte proportion in theyre di-
 viſiones, ſome uſe greate wings of ſhott, whiche are not comendable in
 occaſiones of fighte, for the ſmale troupes are more apte and eaſieſte
 to by governed, and of a ſodaine youe can ſkirmiſhe withe them ey-
 ther in ſingle or double file, and that biſides they bringe more men to
 fighte at once, but when the enemy are ſuperior on horſe, and wee ſee
 we or none it is goode to gett the 4. frontes of the battell of equal re-
 ſiſtance bothe to offende and defende, ſo that the enemy may not take
 advantage of one place more then of the other. The wings or mani-
 ples of ſhorte are not to go any greate diſtãce from the battell of pi-
 kes, and ſpecially when the enemy are ſtronge on horſe, but rather un-
 der the ſhelter, and defence of the pikes, that therby the Squadron
 may by the ſtronger and more ſafe in receiuyng any damage when
 theyr force is united in one boddy as happened to *don Alvaro de Sandy*
 in the journey of caruan in barbery when the exercito of *Giderfa Kin-*
ge of the moores charged on him, one of his Captaines named *Luis*
Bravo de Laguna ſeing a winge of ſhott a goode diſtãce from the ſqua-
 drõ cried on *don Alvaro* wiſhing him withe ſpede to tourne and recei-
 ve that winge for feare that for looſing the ſame he ſhoulde incur
 danger to looſe the body, by dayly experience we ſee that ſmale num-
 beres doe repulſe far greater, and that the army whiche is beſte orde-
 red, and diſciplined moſte comonly is maſter of the victory, wherof
 there are verie many examples in writinge of famous and antiente au-
 ctors, ſo that theſe happy proceedings reſulte of the goode order,
 prudence, and approved experience of the chefe and brave Comaun-
 deres and of the reſolute valor of the Souldieres, as *Vegetio de re militari*
 giveth the reaſon how the antiente Romaines came to Maſter all other
 Nationes, ſayinge that they were not ſo greate as the *Germanes*, nor ſo
 greate in number as the *Frence*, nor ſo prudente as the *Greeckes*, nor ſo
 many in nũber as the *Spanardes* nor ſo ſubtill as the *Africanes*, nor ſo fu-
 riouſe as the *Britanes*, butt by theyr continuall practice and experi-
 ence in warr they overcomed al theſe difficulties, by onely mantayn-
 inge there people wel exerciſed in armes and practice of warr, when a re-
 gimente dothe marche ſome times greate diſorderes are comited, the
 Souldieres runinge away from there coulours, robinge and ſpoylinge
 the country, and poore inhabitantes litle regardinge in not accompli-
 ſhing there obligationes, in beinge abſent from there coulours; litle
 reſpectinge or fearninge there Officeres, and no reſpecte to milita-

ty discipline, wherof resulteth greate ruines and revoltes in many countries, some superioure and inferioure Officeres, are culpable in thiese intolerable disorderes, offensive to the lawes of god and comon wealth in not procuringe, sollicitinge and dayly instructinge theyre Souldieres as a father is bounde to doe for his children, and that as farr as his ability and power can reach, and not to be inclined to steale or wronge the poore Souldier, in keepinge any thinge wrongefully from him, but rather shewing him self very, lovinge and kinde to them.

In equalinge him self in all dangeres and travayles wiche them, in cōtinually, givinge them goode instructiones, and comfortinge them in all necessities, yea and in assistinge them to his ability, in ministringe equitie and goode justice amongste them, in honoring and preferenge those of brave cariage, and goode examples, that otheres may imitate thē, in redresinge in due time disorderes, in seinge severely punished factionerres wholly given to vice and bad examples; whiche are more dangerouse then the divell, so shall he bothe by beloved and feared by the Souldieres, in knowinge that he is carefull in ministringe and procuringe justice to eache one acordinge his deserte, and specially to se base factionerres banished, and severely punished, when there is no hope of there amendmente.

In occasiones of marchinge the Sardgente mayor is to take a speciall care to procure all thinges to be in a readines to bigin his jurney verie early that the Souldieres may come in goode time to theyr quarter for many considerationes to theyr comodity and ease, and in theyre marche not to opress them, but keepe an ordinary pace, for otherwise verie many shall stay behinde. To make al to nowe, and then where he shall hit uppon good water, and he ought to have a regarde in passinge narrowe pasadges, and make also a distance of till they all have paste, and fall into there former divisiones and rankes, a Sardgente oughte to be leifte in eache division of the Regimente, that he may yealde a compte of them at all times, and observe the order as it was ordained by the Sardgente mayor, wiche so many rankes and the self number, so that wiche facility oute of there marche they may fall into squadron, when occasion shall require, and suche a Sardgente or Sardgentes as troughe negligence shall not accomplissh his obligation, to reprehende him in publike. In time of the Romaines suche as were inclined to disobedience in not accomplishinge there order and obligation, they were so severely punished, that no Souldier durste by abiente from his ranke, and the

Sardgentes and Officeres of eache division of theyre marchinges had suche care in accomplishinge whate was referred to there charge withe suche punctuality, that full satisfaction was yealded.

In extraordinary heate weather in somer when the Sardgente mayor marchethe withe his Regimente greate consideration oughte to be taken as before spoken of, by cause of the extraordinary heate, and heavy burden of the Souldier, some times they are chockte, and burned with heate, and for shame, and regarde of there honor they rather try danger of deathe then stay behinde there coulours.

When the Sardgente mayor shall marche withe his Regimente in any place or contry where the enemy is to be feared the divisions ought not to be greater then that they may comodiously marche, nor lesse then the thirde parte of the Squadrō of pikes, some times withe the one haulfe, and some times in battell, allwayes takinge regarde of the situation and occasion.

The Master de campe in marchinge withe his Regimente as cheefe of the same is to marche in the vangarde nexte to whose person is to assiste the Sardgente mayor as a principall minister to whome he deliveres the orderes of his Regimente, but if the enemy shoulde chance to charge on the reregarde he as a cheefe conductor of his Regimente is to assiste in the place mooste to be feared of the enemy, to comaunde and execute in due time whate is mooste fitt.

The Sardgente mayor beinge in campiana, and beinge informed that his Regimente is to marche the nexte morow, he is to repaire to the Captaine generall of whome he is to demaunde order where his Regimente shall marche in the vangarde battell of reregarde, and he is to advertice, and give order to the Captaine de campania to gett all the bagadge charged uppon the a poincted houre ordained, and not to faile in accomplishinge the same, and if the vangarde belongs to him he is to comaunde the Captaine de campania to gett all thinges in a redineshe at the breake of day, and to give order that the coulours and companies of his Regimente, withe speede drawe oute of the quarter, and to marche on to the place of armes, and there to frame his Squadron, givinge order to eache Captaine, where he shall marche that day, and divide the Sargentes and shewe each one his division, and givinge the straighe charge that they accomplishe there obligatiō withe care and punctuality, and that no Souldier doe misse his ranke, nor breake the order given, if the narrownes of the pasadge do not constrain him, and let no Souldier pass to spoyle the poore inhabitants,

tantes, and if he want any Souldier of those of his division, or if any come unto them more then the order givento ad verice the Sardgent mayor, and for recompence of his punctualitie and care in accomplishing his obligation he shall gaine the benevolence of his Master de campe and Sardgent mayor, and in reason they oughte to have a memory of his punctuall care, and to prefer him into a greater office for his obedience and punctuallitie amongste other Sardgentes, and not once nor twice but still makinge knowne his aproved partes, care and diligence in accomplishing the orderes of his Superiores, soe can he not be forgotten by the superior officers till he be by advaced for his undeniable care and obedience.

Moste necessary it is for a Sargent mayor to be courious and experte in executinge well his office, for in tyme of framinge of squadrones the Judges of his errores are many, in time of framinge of squadrones, some Sardgents mayores do fall into many errores, by reason of there litle exercice, and specially for not appliege them selves with the care and diligence bothe in the theorike and practike of this arte, and specially to by skilfull in Arithmeticke, whiche with the practice makethe easy many rare occurrantes in warrlike affaires, and suche as are not curiose in well appleyng them selves in learninge the rare and deepe curiosities of this arte do some times finde them selves pulled and amased before there enemy in time of moste neede: A moste unfittinge thinge it is for one to be ignorant and unhabele in his office, soe i suppose that suche as do not diligently apply themselves, can hardly reduce into perfection that, wherof he is ignorant and knowethe not the arte, by dayly experience, we see that favor, frendshipp, enteres, and affection, hinderethe muche prosperity and goode succeses, and specially in this noble arte of warr.

Many opinionos there are for the divisions of shott, and specially when the enemy are stronge on horse, and that youe have two thirde partes of shott, unto one of pikes, youre battell beinge empaled and girdeled proportionally with the shott, there will yett remayne goode store of shott. The question is how they shall be bestowed to be safe from the fury of the horse, the sureste and beste way is to put them into the center of the battell of pikes, where they are more safe, and if any shott be killed or hurte youe can take at all times oute of the center as many as youe shall neede of.

For the framinge of thiese battelles with the centeres i have already declared howe they oughte to be framed, and proportionolly lined,

and if the enemy horse shoulde chance of a sodaine to chardge on yove, and that youe have no tyme to place the overplusse of youre shott in the center divide them betwixte the rankes of pikes all alongste from the fronte to the reare warde, so they shall by safe and yove can use them at any tyme when ocasion shall require, but havinge intelligence that the enemy are stronge in horse, and we feowe or none in suche ocasioness i woule firste begin in framinge the cener of the overplusse of the shott, havinge oportunitie for the same, and also leave place for hurtemen in the ceter and divide them into so many maniples that they may of a sodaine fall into Squadron square of men in the center, withoute any crossinge aluēge there iuste fronte and flanke and then divide the pikes into maniples to proportionally guarnishe the center on every side or fronte of the same, and then divide in proportion the girdlinge shott that is leste to guarnish the 4 frontes of the battell of pikes, and center, this is the perfecte and right way, but when urgent necessity requireth the overplusse of shott may be placed and divided betwexte the rankes of pikes as before sett downe, advertisinge that the coulours is to goe in the center.

As the battell doth marche on towardes the enemy and cominge once within reache of the musket then the firste rankes of the winges of musketes are to marche in this maner; the firste rankes steppinge some two or three paces, forward havinge in the meane tyme made them selves ready, and cocked there matches, then with readines and expedition all those of the firste rankes (there musketes byenge uppon there restes or forkes) to discharge at once, permitenge other rankes to proceede, then presently those of the seconde ranke to stepe upp before the firste ranke, as the battell or batallon do marche, and so to discharge as theyre former followes had don before, and then the thirde ranke before the seconde, and the fourth before the thirde, and soe all the other rankes consequently with this kinde of double marche. and at the traine of the laste ranke those of the firste to folowe upp a gaine, and so consequently the reste. But if chance that the Squadron of pikes be distresed, or constrained to retire, they are to discharge at the enemy, retiringe backe uppon a counter marche each feele or ranke, consequently, and with expedition one after a nother, and with the speede fall bake into there ranke, to give place to the nexte rankes, that no time be idell employed.

Sundry opinioness there are of comparissones betwext the Infanterie,

tery and Cavallery, whiche of them is moſte utill in the warres, the one and the other are moſte neceſſary in occurrances of warlike affaires, but in my opinion the Infantry is to be preferred firſt beinge well diſciplined in the arte of war, never the leſſe the cavalleria beinge well monted and armed and beinge experiente, ſouldieres, beinge conducted by prudent and brave conductores doubtleſſe theyr executiones and reſolution is to be feared, but they are not comparable to deale, with the reſolute foote, excepte upon manifeſt and greate advantages, and in place or ground of greate favor for them. For beinge well known that a reſolute ſtande of pikes well ordered, and girded with ſhott, will give them ſore ſtoppes, and retournes as plainly appeared when *Marques de Peſcara* with 800 ſhott attained the victory of *Charles de noy* then Viſroy of *Napoles*, with his Cavallery at the battell of *Pavia*, a nother example wee have of the *Conte Francisco Carmognolla*, beinge Captaine generall of *Filip* *Viconte* Duke of *Millanes* army, goinge with 6000. horſe againſt the *Swiſſes* army, was by them repulſed by the valoure, and lengthe of there pikes, who havinge regathered this diſordered troupes, conſideringe from whence there diſadvantage grewe, turned head againe upon the enemy: and he him ſelf and his companies diſmounted on foote, and with there lances in hande framed a foote ſquadron, and charged the enemy a freſh, and brake and overthrew them in number above fifteenethouſande when by force of horſe coulde not be removed, imitatinge herin *Marcus*, *Valerius*, *Cornelius*, who beinge conſull and Captaine againſt the ſamnites in the firſt punny warres, and in theyr laſt battell not able to enter upon them by reaſon of there longe pikes where with they defended them ſelves, commaunded his horſemen to diſmounte, and on foote they arrived as they were with there lances, to fight with there enemy, and overthrew them and putt them to flighte obtaininge the victory, and remayinge with there baggadge, and in the battell given by *Constantine* *Roxianus* Captaine generall to *Sigismund* Kinge of *Polonia* with *Baſilius* the greate Duke of *Molcovia* by the river *Briſva*, who ſurmounted him on horſe backe, three thouſande foote men; onely, he had in his army, won him that day the honor and victory, alſo as did appear by the memorable battelles of the *Engliſhe* againſt the provde cavallery of the *frence* at *agincourte* ſielde and other places, many more examples mighte be recited bothe antient and moderne, remembringe that amonge the antiente *Romaines* there foote was al-

wayes

wayes of more estimation then there horse, allwayes houldinge a true opinion, that the Infanterie well disciplined is the right sinue of the warr, the walles of the citty and fortress of the realme.

I have hearde say that in thies warres of the netherlande, after that the grand Comendador died that *Don Alvaro de Vergas*, who at that time comaunded the Spanish Cavallerie, did greate exploictes in encounters, he had withe the states foote and horse, but it muste by considered that those were oulde and experimented Souldiers, restinge uppon a resolute and valerouse determination.

The otheres for the moste patre *Bisones*, and rawe people raised uppon a sodaine conceipt, in whiche actiones is marvelouse to be marked the difference betwene men of experience, and rawe *Bisones* the prudent cariage, resolute valor and goode conduction of the one, and litle practice, and experience of the otheres, as did apeere in the reincounter at tilmonte, and at the souckeringe of monts-dog beinge Taken by them of Mastricke, and moste notable in the sacke of Antwerpe where lesse then withe the number of 5000. Spaniards inclosed within the sitadel gave the overthrowe and foile unto 16000 of the Anturpianes. Bravely armed and incamped within theyre owne towne. In like sorte at the overthrowe of Gibleo where not above 600. horse, of don Iohn de Austria his troopes defeated above 15000 of the states, (moste strange and wonderfull) onely for wante of goode conductores and the enemy spyinge theese advantages resultinge of there simple conduction founde them selves amased.

And for as muche as i have spoken muche of this office, i will conclude in sayenge that he oughte nowe and then to visite and revisite at diveres and differente houres all thinges by him provided and appointed, and see that they be prudently ordered and performed, reprehendinge whate he shall finde wourdie of punishmente, but that to be don prudently and in curtouse sorte, and presentinge good reasons withe amiable and gentle wourdes, with gravitie and naturall grace, and not with puffinge inconciderate pride and bad examples, so shall he by obeyd in such sorte that when he woulde determine to execute his designs and orderes of his superior comaunders, all of ficers and souldieres mighte beare him that due respecte and obedience, whiche shoulde by required to bringe his purpose to effecte, and let not griddy couetousnes overcome him in wronginge or permitinge to be wronged the poure souldieres of their righte, and specially in tyme of extreame necessitie, but rather make knownen his
gent.

gentle inclinationes and true love, soe shall he by beloved feared and respected.

Let him not by inclined to any odious rancor nor malice in waitinge oportunitie of revenge of some wourdes or disputes, whiche happened betwexte him, and some Officeres or Souldieres of his Regimente for defininge theyre honour and righte, and findinge that he be so inclined is signe of aloe unconsiderate and base minde. All Officeres and Souldieres of his Regimente oughte to have a speciall care in not loosinge him his due respecte, and suche as do not accomplish with their obligations hirein are righte wourthy of reprehension, soe all thinges don with moderation and justice is laudable.

S

An

An army of 11200. men divided into five battelles Square of ground ordered to fight, as by the figures followinge youe see. The fronte of each battell is 72 and 31. the flanke, and 8. remaininge bute of the division of each battell; each battell containes 2240.

The army divided into five battelles.

SQUARE OF GROUNDE,
by the rule of proportion.



Rule of proportion.

$$\begin{array}{r} 2 \overline{) 2240} \\ 1120 \\ \hline 1120 \\ \hline 0 \end{array}$$

$$\begin{array}{r} 4480 \\ 72 \overline{) 4480} \\ 5040 \\ \hline 4480 \\ \hline 0 \end{array}$$

$$\begin{array}{r} 3 \overline{) 42} \\ 14 \\ \hline 42 \\ \hline 0 \end{array}$$

$$\begin{array}{r} 72 \text{ fronte} \\ 31 \text{ flanke} \end{array}$$

$$\begin{array}{r} 72 \\ 31 \\ \hline 72 \\ 2168 \\ \hline 2240 \end{array}$$

The saide army of 11200. divided into seven battelles. Square of ground, each battell shall containe 1600. and the fronte of each battell is 61. and flanke 26. and 14 pikes remaininge oute of each battell to guarnish the coulours, the which 7. battelles are ordered as by the figure followinge youe see. ——— 1600. men in each battell.

The army divided into 7. battelles.

SQUARE OF GROUNDE,
By the rule of proportion.



$$\begin{array}{r} 1600 \\ 2 \overline{) 1600} \\ 800 \\ \hline 800 \\ \hline 0 \end{array}$$

$$\begin{array}{r} 3200 \\ 533 \overline{) 3200} \\ 1599 \\ \hline 1601 \\ \hline 0 \end{array}$$

$$\begin{array}{r} 12 \\ 3733 \overline{) 12} \\ 3666 \\ \hline 1224 \\ \hline 0 \end{array}$$

$$\begin{array}{r} 61 \text{ fronte} \\ 26 \text{ flanke} \end{array}$$

$$\begin{array}{r} 61 \\ 26 \\ \hline 61 \\ 1224 \\ \hline 1600 \end{array}$$

$$\begin{array}{r} 366 \\ 1224 \\ \hline 1600 \end{array}$$

$$\begin{array}{r} 1224 \\ 1 \overline{) 1224} \\ 1224 \\ \hline 0 \end{array}$$

$$\begin{array}{r} 1600 \\ 1 \overline{) 1600} \\ 1600 \\ \hline 0 \end{array}$$

$$\begin{array}{r} 366 \\ 1224 \\ \hline 1600 \end{array}$$

$$\begin{array}{r} 1224 \\ 1 \overline{) 1224} \\ 1224 \\ \hline 0 \end{array}$$

$$\begin{array}{r} 1600 \\ 1 \overline{) 1600} \\ 1600 \\ \hline 0 \end{array}$$

A bat.

A Battell square of men, withe a center of Arcabuseros, which can not by defended under the shelter of the couched pike, when the enemy doe a bounde on horse, and wee feare or none, in such occasions the sureste way for the overpluse of shot is to by putt into the center, and proportionally guarnished with the pikes and musketes, as by the figure followinge youe see, and howe they are divided by the rule of proportion.

276 Arcabuses.
360 Pikes.
364 musketes.
1000.

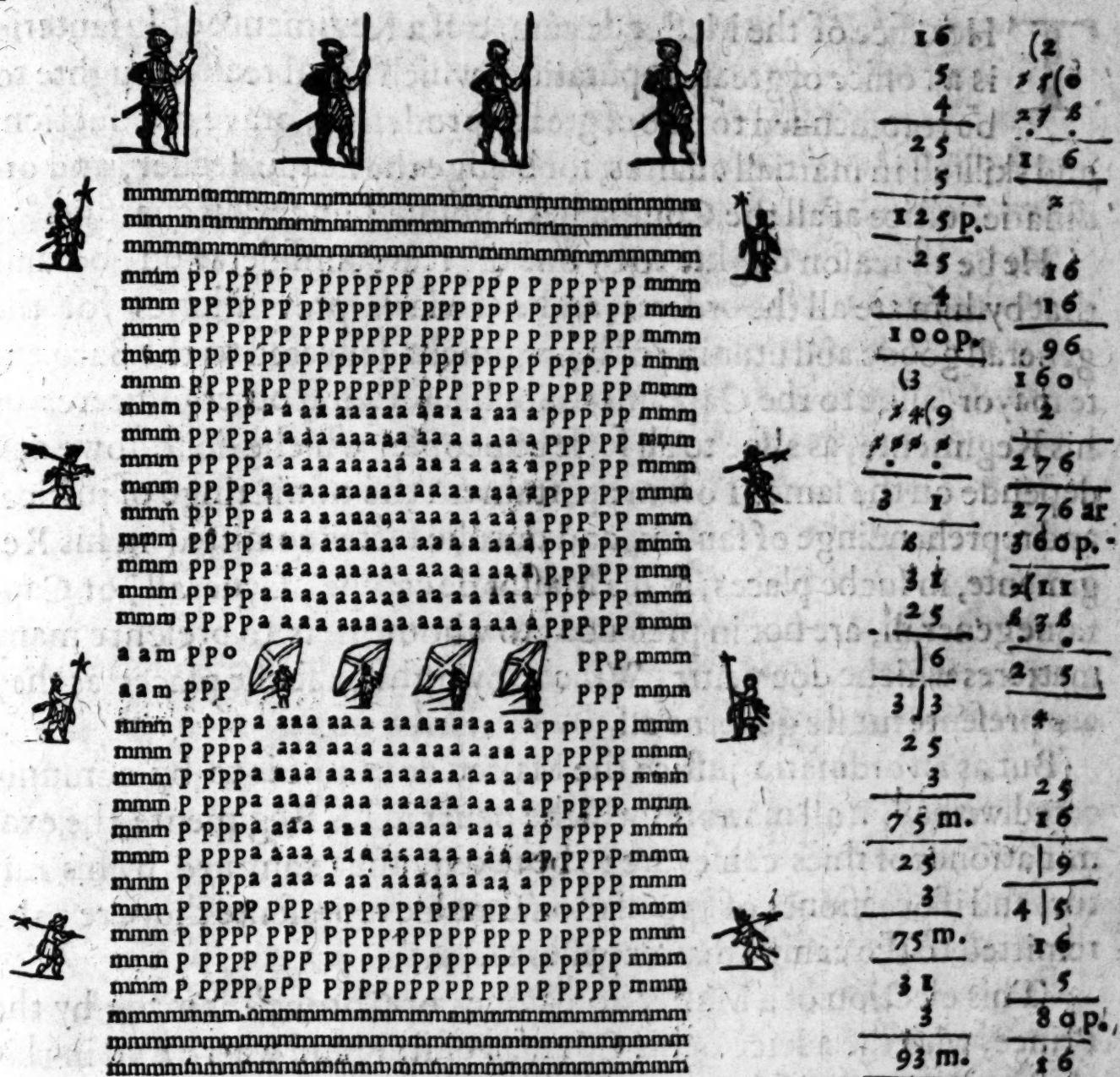


Table of the battell and center of Arcabuseros deposito.

BY the division of the center of Arcabuseros the square route of the same number yealdeth 16. Arcabuses in fronte and flanke of the center, and 20. remaininge oute of the division, moneth

The firste division of pikes that guarnisheth the righte flanke of the center, divided into 16. rankes of 5. pikes in each, moneth

The secōde division of p. that guarnisheth the liefte flāke of the center divided into 16. r. of 4. p. in each. 64 pikes.

The thirde division that guarnisheth the full fronte, and the two linenges of the center is divided into 25. rankes of 5. pikes in each ranke, moneth 125 pikes.

The fourthe division of pikes that guarnisheth the full fronte of the rearwarde is divided into 25. ranke of 4. pikes in each ranke, moneth 100 pikes.

The lining of musk. that guarnisheth the right flank of the pikes is divided into 25. r. of 3. m. in each. 75 musk.

The seconde lining of musk. that guarnisheth the liefte flank of the p. divided into 25. r. of 3. m. in each. 75 musk.

The thirde division of musketes that guarnisheth the full fronte of the pikes and center, is divided into 31. rankes of 3. musketes in each ranke. 93 musk.

The fourthe division of musketes that guarnisheth the rearwarde of the pikes and center is divided into 31. rankes of 3. musketes in each ranke, moneth 93 musk.

The remainder of musketes, that do guarnish the colours. 8 musk.

Of the 20. arcabuseros, that did remaine goes to guarnish the colours. 4 arcab.

The 11. pikes that did remaine oute of the division of pikes are employed to guarnish the colours. 11 pikes.

Of the remainder of arcabuseros their remaineth oute of the battell. 16 arcab.

1000.

The election and office of a Master de Campe of a Regimente of Infanterie.

THe office of the Master de campe of a Regimente of Infanterie is an office of greate reputation, which by all reason oughte to be recomended to one of greate prudence, brave conduction, and skillfull in martiall affaires, for beinge the heade, leader, and ordinarie justice af all the Companies a pointed under his chardge.

He be all reason oughte to by one of greate confideration, because that by him are all the orderes, and necessarie prevenfiones for the generall goode and utilitie of his regiment delivered to the Sargente mayor, alsoe to the Captaines, Souldieres, and other Officeres of his Regimente, as alsoe to all sorte of people, whiche do followe and depende on the same: To him apertaineth the ministring of justice, and reprehendinge of faultes, and unrulie factes comitted in his Regimente, in suche places, as his Master de campe, Generall, or Capitaine generall, are not in presence, to whome he is to presente many matteres whiche doe occur, Whiche by right in suche places as they are presente muste governe all.

But as an ordinarie justice the Master de campe is to by comuni-cated withall, in all matteres whiche occur in his Regimente; the examinations of thies causes are to be taken, and examined by his Autor, and if occasiones of appellation shoulde presente they are to be remitted to the campe master generall.

This election of a Master de campe, or Coronell is made by the Prince, with the advice of his Counsell of state and warr; And in this election greate confideration oughte to be taken. For beinge suche an honorable chardge of highe degree; as chieftaine or head above all the Captaines, and other Officeres of his Regimente, havinge dominion and jurisdiction over them all: By whiche may by perceived the highe dingnitie and degree of suche a person, and the a proved partes brave conduction, valeoure, and goode examples, whiche of him is to be expected, (to the ende that the Captaines may imitate his prudente perfection and brave governmente.) In suche places where the Captaines of his Regimente do assiste with him, of all occurrences and occasiones of warr they are to advertice theyre Master de campe,

pe, and if any Officer or Souldier by a prehended, for faultes comitted, they can not by put at libertie, withoute the Master de campos order, beinge in his jurisdiction.

In time of the Romaines *Polybe* writeth that this name we call Colonell or Master de campe was then cauled *Tribunus*, and they cauled *Legion*, of that whiche we call a Regimiente, theyr legion was of 4200 foote men, whiche they divided into 10. partes, as if it were betwexte 10. Captaines, eache division they cauled *Cobortes*, which we call a Companie, each legion had 300. horse, theyre Captaines *Cinturiones*, some of 150. and some of 200. Otheres were *Centenarios*, whiche had but 100. men. For the ministringe of equitie and justice, and reprehendinge of faultes and disorderes, and that military discipline may by duely, observed with infalible punctualitie; he is to choyse an Auditor of a man well learned and of goode judgemente, withe his Clarke and Augusill, whiche are used amonghste the Spanish and Italian Regimientes, to take informationes of suche injuries, and disorderes as are comitted, this Auditor is to give the sentence, but no auctoritie to execute the same, withoute consultinge firste with the Master de campe, and getinge his firme to the sentence, for other wise he hath no auctoritie to execute nor dispatche the same, the Augusill serves to assiste the executions of the Auditores a faires, and alsoe to by imployed, and sollicite many other thinges, that doe pass trough the Auditor is handes.

For makinge or dividinge of quarteres marchinge in campaign or garison, he is to get a skillfull Quarter-master able in readinge and writinge, and specially perfecte in Arithmeticke, for to him apertaineth, the receavinge of all sortes of amuniones and armes given, and delivered by the Prince, but the distributinge of the same belongeth to the Sargēt mayor, to see that all thinges by duly and equally distributed. Of al sortes of amuniones received of the Kinge, the furiell mayor is to yealde a cōpte, when it is soughte for, for bienge his office and dutie. The furielles of the Companies are to assiste him in all ocasioness in marchinge, and to receive theyre ordenes from the furiell mayor, and he from the Quarter-master generall; and the from the general. Greate care oughte to be taken in seinge that the Sutleres be well provided with all necessaries, and to see that they by well paided; A speciall care oughte to by taken that they do not deceive the Souldieres with faulce weighte and measure, nor nothinge a bove the price ordained by the Master de campe.

It is necessarie that the Sutleres and Marchantes, whiche doe followe the Regimente, that they be well garded, that theyr vituales and wares may depende uppon goode securitie, for thies affaires the Captaine de campaina and his Leutenant oughte with care to assiste in executinge his dutie and office.

In occasiones of marchinge he and his teniente and men are to by verie vigilante and carefull, in not permitenge the Sutleres nor theyre boyes to stragle, or fall a spoylinge the countrie and povre inhabitances, nor to take perforce any thinge that cometh to by fouldie in the campe, as alsoe to have a speciall care to lett no Souldieres pass, causinge them to fall into theyre rankes, rather then to be permitted to run straglinge and spoylinge the countrie; And suche as are found giltie in breakinge the proclamation to see them presentlie executed. Soe beinge earneste and carefull in thies affaires shall he oblige all suche Souldieres as are inclined to minester goode justice and examples, and esteemed for a true father and brave conductor. A necessarie thinge it is alsoe to have a goode Doctor of Physicke well learned and of longe practice, as alsoe a Surdgente mayor one well knowne to have had longe practice in handelinge of woundes and other disceases, suche a one chosen by favor or affection (and not havinge the partes besitinge) causeth the death of many Souldieres trough his litle skill, to the disgrace of him that made choyse of suche a one.

Verie necessarie it were that in his Regimente doe assiste a Chaplen mayor, and preacher to over see all the Chaplenes, that all thinges touchinge there obligationes, may by observed and ministred in due time, givinge goode examples, and still assistinge with gravitie and vertueuse cariadge, alsoe to be carefull that the Captaines of his Regimente give goode examples for it importeth for many respectes.

In the election of a Drom mayor he is to by verie well informed that he be one of goode sufficiencie, for beinge an instrumente very necessarie in warr, who is to instructe, and give goode examples to all the Dromes of the Regimente, whiche beinge chosen of one who hath the goode partes and sufficiencie in him required, is an instrumente of greate importance in a Regimente, and specially to the Sardgente mayor, in carieng orderes, and beatinge of the proclamations, he is to by skillfull in beating the drom, or at leaste in understanding all sorte of marchinges, to beate an a larme, a call, a retire, a disafe, a battell, to knowe who to carie him selfe verie discret in carieng any mesadge to a campe, towne, cittie, or castell, and knowe howe

howe discretly to deliver his mesadge, and answer many demaundes, as alsoe in understandinge, and well relatinge his answer, and to informe him selfe in as muche as he may posible of whate occurreth, if he be permitted in takinge a viewe of the walles ditches, and if the ditches be dry or with water, and who deepe, and whate place or places of the walles or fosses may by won with more ease, as also of the necessitie or plintie of vituales, if by faire meanes he may spie the same oute it is necessarie that he speakes many languadges, to beate a furiose alarme, and battell when occasion shall require, as alsoe a presumed retire. A necessarie thinge not to be permitted (but rather defended) that no officer nor souldior by given to winching, and that for many good respects, but som publicke woomen are wonte to be permitted in eaché company, some three or foure for a 100. men, which are to be in a separated quarter, and specially if in garison lett them be in as secret and as hidden a place as can by posible, for by reason it importeth to honeste men and negboures, and the cause why this is permitted and tolerated, is to shun greater danger: In the oulde lawes or statutes six or eighte woomen were a lued for everie 100. men, to thies is wonte to be given lodgings and service as to the souldieres, all whiche is thoughte profitable to the negboures, that the lesse suspicion and occasion of scandall may by of their sisters wives and children, and for many respects it oughte not to by permitted that a ny souldier doe sleepe with the thies woomen oute of his quarter uppon paine of severe punishmente, alsoe such weemen as doe nott observe thies constitutiones to punish hir in the purse, whiche will griue hir moste, for this busines is wonte one to by a pointed to ouersee if thies lawes by observed or no. For it importeth muche the souldiores health, wher fore the barber mayor is wonte to uisitt nowe and then. The Captaine de campana is to tak a speciall care to see that thies orders by duly observed.

The Master de campe is to be earneste in informinge him selfe well of his regimete, as well of secret as of publike matters, that he may prevente and remedy in due tyme all, and cause to be severely punished such as doe breake the proclamations by him comaunded, and suche as are inclined to base factes, as theives, quarleres, dishoneste dronkardes and base mutineres, of litle pascience and lesse honoure, of no discreffion, feare, nor love, nyther of god nor of their prince, suche base fellowes are to by severelie punished in publick, and to by driven a way like men tatched with ugle crimes, unwourdie

die to equall them selves with the brave souldiours, of honeste life, full of pacience, obedience, feare and goode examples; of which persones, the master de campe, Sardgente mayor, and Captaines, are to take notice, and have a speciall care in honoring and preferinge them, shewing them a faire and lovinge countenance, and givinge them greate hope of advancemente, and let triall of time and occasions verify the same with deedes, whiche shall by a greate comforte to suche as are inclined to vertue, and greate greefe to those given to vices and unrulie factes and bad examples, whiche oughte to amende their lives, and imitate the steppes of those of honeste life, prudente and vertue cariage, full of love, feare and obedience, given to continuall goode applicationes, shuninge idelnes and bad company, which of righte oughte, by there Superiores to be highlie esteemed, (whereunto they are bounde in conscience) For the securitie of occasions in marching and in preventinge of sodaine and unprovided incursions, ambuscados, and stratagemes of the enemy: A necessarie thinge it were to imitate the Romaines, in a lunge fiftine horses to everie 100 foote, so that in many places in marching where theyre may by any suspicion of the enemy, the Master de campe, then shoulde appointe a conductor to leade and governe thies horsemen, and in offeringe time or occasion, to divide them into as many partes, as the occasion shall require, (appointinge a leader for each division) and for the intertainement of thies horsemen they shoulde enjoy so much meanes as other horsemen; so that in occasions of marching, the Infanterie may goe with far greater securitie, beinge divided into thre or foure partes, to reknowlege the places of moste suspicion of ambuiss, and other secret stratagemes of the enemy, whiche beinge reknowledged and discovered, necessarie prevention may be taken in due time, thies men may serve bothe for horse and foote accordinge as occasion shall require: Of each division or parte of thies horse it is necessarie to name a Comaunder or leader, who shall take care to governe them, forbiddinge and comaunding that by no meanes they lende thies horses, but get them alwaies readie to be imploied, when or where occasion shall require. Thies horses may serve for many goode purposes, in passinge the Infanterie over riveres, in reknowledginge pasadges, as alsoe in cominge in possession of pasadges, whiche beinge feared that the enemy shoulde come to possess the same before oures.

The Ende of the firste Booke.

the ... rie over riveres, in retnoledginge pasadges, as alsoe in co-
m ... fession of pasadges, whiche beinge feared that the enemy
sh ... e to posses the same before oures.

The Ende of the firste Booke.

THE
SECONDE BOOKE
TREATINGE
OF
MILITARY
DISCIPLINE,
COMPOSED
BY
CAPT. GERAT BARRY
IRISH.

THE FIRST CHAP.
THE
SECOND BOOKE
TREATING
OF
MILITARY
DISCIPLINE
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THE FIRST CHAP.

Bigininge with the election and office of a Campe-master generall.

THIS Office trowghe greate consideration is to be comended and bestowed upon a personadge of greate gravitie, prudence, and valeour, and of tried experience and exercise in warr, that therby he may comaunde with greate auctoritie, and by esteemed acordinge his qualitie and truste; Whiche ought to be reputed in a personadge of so many a proved and goode partes. This office is of such greate importance, that the securitie and goode success of the whole army dependes for the moste parte on him; as a cheefe-taine and head over the whole army, and all the orderes of the Kinge are by him given, and by his comaunde observed: But when the Captaine generall is in presence, (all muste depende on him) beinge a Superior, and nexte under him the Camp-master generall, as *Lugar-teniente*, and in his absence doth comaunde the whole army.

This office with the Romaines was of greate and high estimation; which they cauled *Metador*, he is to be of suche extraordinarie prudence and care, that not withstandinge he giveth the necessarie orderes, he himselfe muste visite, and see who all thinges are ordered, for which he is to have nexte his person a rare Inginier for many effectes, and for the dividinge of the campe betwexte the Regiments, Cavalleria and Artillerie, the necessarie groundes, distance, and circuide for the same, in dividinge the iuste proportion of grounde due to severall sortes of nationes, in whiche greate consideration oughte to be used, for whiche purpose he have a Quarter-master generall, whiche oughte to be curiouse in thies.

Firste shall be a pointed the fittest place for the Generall, and if theyre by any reall personadge consideration also is to be taken: This place is to be chosen for the moste assured and beste, placinge the Cavallerie on the outwarde side, and the Infanterie on the other side, he beinge shutt and inviorened betwexte both. The quarter of the

the Artillerie, and of his courte and traine is to be ordained in a sure place, and well garded rounde a bout on every side; Theyre traine of Officeres galladoses wourkmen pertrechos of fundrie sortes of munitiones, ocupies greate roome: The Cavalleres and pionsioneres nexte the generall is person, Auditor generall, Provoste generall, a Tambor mayor generall, and many more folowinge the Generall, are to be placed not farr from the Generall, and the Provedor generall is also to be placed not farr distance if a conveniente place can be founde for his purpose, for he alsoe requireth muche roome for his amunitiones and wagones. The Infanterie shall invieron the whole campe, the Ingineres are alsoe to visite all over the campe, and findinge that water is not plentifull to open pittes in the beste and convenientest places for the lame.

In the ocaiones and repartitiones that shall offer in imployenge the foote and horse in convoyes to scout and recnowledge doughtfull places and ocaiones, and to featche foradge, it oughte to goe by turne, soe that eache one shall take his share of the paines and troubles, excepte onelie in time of hote and extraordinarie service, for in suche ocaiones greate considerations oughte to be had, in choysinge those that are more fitt for the purpose, which shall be employed as it shall be more fitt. Greate care oughte to be taken in due time to be well provided of all sortes of amunitiones, as alsoe of all sortes of vituales, and take a speciall care, that all thinges be prevented in due time, that the enemy doe not let or hinder youre convoyes, nor the pasadges, where they come with all sorte of provision for the campe, and to be prevented a gainste all stratagemes they can prevent: When the army shall marche, and that theyre shall be many regimentes of severall nationes, in theyre divisiones, and in the observinge of goode order greate care and industrie is required, givinge order that eache nation by theyre turne shall marche in the vangarde, battell, and rergarde, for beinge so conveniente for his Majesties service: If youe chance to marche troughe an enemy countrie, or nere unto theyre frontieres greate vigilance, and goode order needeth to be observeth, it importeth alsoe to get goode and faithfull guides, and diferente spies of truste, for feare of fraude, as alsoe for to have goode intelligence of the enemies designs in due time.

In suche ocaiones nedeth muche to sende before some horse in a certaine distance to discover, and learne the plottes and stratagemes of the enemy to hinder our journey. Havinge had intelligence, and beinge

beinge well informed that the enemy are waitinge for to hinder youe; Cause the Artillerie to marche with theyre garde, and drawe upp the Infanterie in goode order on the other side of the Artillerie betwexte them and the enemy, and the horse alsoe on the outewarde side of the Infanterie, (and in a goode distance of.)

It is necessarie to by prevented of the enemies designes, and consider the situation where youe marche, soe that youre divisions may acordinglie be ordered, as the situation shall permit and require; In narowe and straichte pasadges, goode order is to by observed, and specially where the enemy is to be suspected, and that the Sardgentes be verie carefull in accomplishinge theyre obligationes, soe that theyre be no crossinge nor confusion, and suche as shall not keepe theyre rankes to severelie punish them in publick, in as muche that they and the behoulderes may take notice of the same, soe that in oferinge occasion with grace and brevitie they may of a sodaine fall into battell. If inteligence be had that the enemy be stronge on horse in the vangarde or way where wee intende to pass, and that the pasadge where wee march be soe narowe that oure horse beinge in the vangarde, and beinge chardged and broken by the enemyes horse, and that the narrownes of the pasadge doe not permit that they may pass on eyther of the two flankes of the Infanterie, and beinge brocken they fall on oure order, and wee incurr greate danger if the enemy doe followe with a brave resolution, if theyre be no remedie that they may pass on eyther of the two sides, of force way is to be made for them, and the shott are to come all on one side of the pasadge, and make way, and the pikes are to be opened on bothe sides of the way, in thies occasions and many more occurrantes in warr greate danger may occur, excepte prevention be prudentlie taken in due time.

In suche occasions a troupe of musketes and arcabuseros are necessarie to by sente in the vangarde, and then five or six rankes of pikes, which with theyre fronte shall ocupie the pasadge, which shall revieve recnoledge, and advertice if theyre by any danger or ambuscado.

After thies the reste shall march in goode order as before declared in the office of the Sardgent mayor; In the rergarde shall the Cavallerie marche with a garde of shott and pikes, after which shall marche the Cavallerie in order, and if inteligence be had that in the vangarde, theyre by any impedimente, or lett that oure Artillerie can nott pass or any parte of the army, lett theyre marche a Company of gastadores, with theyre Captaine to acomodate thies impedimentes,

and in case the enemy by suspected, to conducte them for theyre better securitie with a troupe of lighte horse, (together with an Inginier) with thies gastadores beinge in quantitie, unespected and difficulte matteres are broughte to pass, and sometimes riveres are taken from theire moother, and conducted to other places, as did *Ciro* Kinge of *Percia* goinge to beleager *Babilonia* he divided the river *Gange* into 360. partes for the revenge of the drowninge of a Gentleman a deere frinde of his, soe that this mightie river was lefte of no force: Kinge *Ciro* seinge it so feoble saied thove haste not respected nor feared my, but nowe all thy forces for a revenge, are seperated that a wooman with a childe may pass thy over withoute feare or danger: So the Generall of an army is allwayes to consider, that it is of greate importance to have many gastadores, for by theyre meanes matteres of greate difficulte are broughte to effecte with facilitie, for many handes maketh lighte wourke.

Greate industrie and many aprooved goode partes are required for the rare executiones of this office of a Master de campe generall, of whose prudence and brave conduction greate exspectationes are to by hoped: When he aprocheth neere the place where he thinketh to pitch his campe uppon, he is to goe forward with a suficiente garde of horse to viwe all the circuide, and he is to be accompanied with one or two Ingineres, to ordaine and divide the quarteres; And when, the army shall inter into the campe or place where they intende to pitch theyre quarter the Generall of the horse shall remaine in the felde, he and all his troupes mounted, till all the Infantry be in camped, and then to inter orderlie with his troupes, and repaire to theyre quarter, leavinge his scoutes in the felde till the Trumpetes found, and the watch by set, and the cinteries placed in theyre postes, at which time, and when the watches of foote and horse are set in theyre due places, they shall retire, and not before, for the better securitie of the campe, and that nothings may happen withoute preventinge in due time the necessarie remedies, or as neere as can by posible.

THE

THE SECONDE CHAP.

*The election of the Captaine generall of the
Artillerie.*

THe office of the generall of the Artillerie, trowghe greate considerations of his aprooved goode partes and sufficiencie, is chosen and apointed by the Prince, consideringe his longe and tried experience in warr, his gravitie, prudente and brave conduction, and valerouse actes.

This honorable office of so highe dingnitie and truste, in choylinge of his Officeres and Gentlemen of the Artillerie, it importeth that he be well informed that they be men of many goode partes, skillfull and curiouse in many ingines, and to be verie carefull, and vigilante; For this office of manadginge of poudre in sundry maner of wayes is of wondrous danger, excepte it be prudently carefullie, and with greate vigilance handled, as well simple as artificiall; which be severall triales I caused to be tried by severall persones, (and often times) and hardlie coulde I finde any of suche care and vigilance for the manadginge, and keepinge of the same as required, for beinge the moste dangerous thinge that is, or can be handled in warr. An enemy who giveth no time nor respecte, his treasures are most terrible, speedy, and of unmercifull executiones, and moste comonlie do fall on such as doe moste truste in it, in his executiones there is no appellation, nor grace to be expected.

This Office requireth many Officeres; Firste his Leutenante, Mayor Domo, Contador, Pagador, his ministeres for the examinationes and executiones of justice, Ammunitioneres, Gentlemen of the Artillerie, his Ingenieres, Masteres of severall sortes of ingines of fire-wourkes, Canonieres, Masteres of the mine, or Minadores, Gastadores, or Wourkmen, with theyre Captaines, a Furiell, Smittes, Tembermen. A greate store of tentes is required for the fastie of thies variable sortes of amuniones and pertrechos, as poudre of all sortes, led, match, and all sortes of bulletes, and in quantitie for greate and smale ordenance, it is alsoe necessarie he be accompanied with a curiouse Inginer curiouse in all sortes of fire-wourkes, necessarie for ve-

rie many executiones, if one of such aprooved partes can by hit upon, he is also to have Masteres who have goode skill in makinge and refininge of powder: When occasion shall offer to plante his greate ordnance to beleager or batter a towne, cittie or Castell, his Leutenante, Ingineres, Mine-masteres, and Powder keeperes, and Gentlemen of the Artillerie, are all to by in a readines to dispose of the Artillerie and amuniones, when occasion shall offer, that it muste by planted, or sente from one place to a nother, and his Leutenante is to gett a relatiō, who many cannones shall by apointed in each place; and consider suche as are fit for one execution, and for a nother, but thies resolutions muste com from the Captaine generall, or Master de campe generall, which of them doth comaunde in the fiede, but the execution belongeth to the Generall of the Artillerie, and to such under him to whose chardge they are recomended, the Leutenante of the Generall of the Artillerie is to see that theyre by horses and wagones i nough, and to be verie, vigilante, and carefull to visite often times the store houses, where the powder led or math doe lye; Of which doublecinteries oughte allwayes to be putt uppon, for many goode respectes, and specially for feare of spies to use industrie to give the same fire, wherfore prudente Generalles of the Artillery are wonte to divide thies munitiones, in sundrie and secure places, (fearinge of a sodaine disgrace.) Alsoe he is to see that his Canonieres or gunneres doe lye every nighte by theyre cannones, that they may in a readines uppon the firste advice, and it were necessary that each Canonnier shoulde have a boy to assiste him.

The Leutenante is to by verie curiouse and vigilante to see that the greate ordnance by still well provided with all necessarie instrumentes, and rather more then less, fearinge of urgente necessitie, and that theyre wante no kinde of munition, nor instrument fitt for theyr sundrie executiones. It is necessarie that there be a certaine quantitie of goode refined saltpiter three times refined, camphora, vinager, sal armoniak, sal gema, rosen, colofonia, stronge brandevin, a store of o-kom, linsat-oyle, gineper-oyle, all which are required for severall executiones of fire-wourkes, when occasion shall offer, but for the curiouse orderinge of thies compositiones, for there severall and rare executiones, wee finde but verie fewe:) It is necessarie that he be accompanied with good carpinteres.

He oughte to by curiouse and carefull in seinge that all sorte of munitiones be boughte before he shall have neede, for often times we

see

see that in times of moſte neede. Verie litle can be had, and ſometi-
mes all moſte none at all, and ſpecially pouder and matche, for often
times oure enemy ſecretlie under hande buyes all that can be had; ſoe
the Generall knowinge this matter to be of ſuche importance to his
Majeſties ſervice, is to ſee it prevented before hande; Greate conſide-
ration oughte to be taken in knowinge where beſte to plante the or-
denance, and to fortifie and intrinche with ſpeede, as time and oca-
ſion ſhall require, and to keepe good watch, and to be accompanied
with good Controulers, for to provide all ſortes of proviſiones.

He is to knowe who to approach, and who with prudence and good
watch and vigilance to ſecure him ſelfe and Artillerie, and in many o-
caſiones not to truſte to many, butt rather in perſon, and with ſpee-
de to ſee thies thinges putt in execution as the importance of the oc-
caſion ſhall require, (and to be well garded on every ſide,) He is to
ſee that his Artillerie doe orderly marche, and ſuch as do not obey
the orderes by him given, to ſee them ſeverelie puniſhed; he is to kno-
we at nighte who his ordenance ſhall be planted for the execution
he ſhall exſpecte, and by day ſee the ſame ordered, in takinge the
heighte and line for his purpoſe, eyther a farr off or neere, if it be into
a cittie towne, or forte, or in the fronte of the enemy, or if by chance
they ſhoulde come to defeate him to be prevented.

When occaſion ſhall offer to paſs an army over deepe riveres, it
is neceſſarie to be well provided of boathes of two yardes and haulte
deepe, wheruppon bridges are to be framed, which are to be made of
firr onge tember, and planks to paſs the Artillery, and the whole ar-
my, as did that famous and prudent Conductor *Marques SPINOLA*
in takinge of Reinbarke, and the ſcounſe over the Rhine, and in ta-
kinge Veſell, and in the honorable regaininge of Breda.

They are wonte to carie for thies bridges ſometimes 30. boathes
ſometimes more: Firſte conſideringe the greatnes of the river, where
they meane to paſs over. To which purpoſe is required a Captaine
for every fiftine boathes, and to each boath foure Marineres, ſome,
times more, and ſometimes leſſe, accordinge as the Generall ſhall thin-
ke fitt, and as many Carpinteres as ſhall by toughte neceſſarie, alſo-
ſmittes to ſheowe horſes, and for many other purpoſes, a ſtore of anc-
cores, cables, graplinges, while wrightt with ſuch neceſſaries; Befit-
tinge his purpoſe, and allwayes muſte not faile whiles to ſpare, for
the cannon, and greate ordenance, fearinge leaſt any while ſhoulde
breake, that preſently prevention may be had.

THE THIRD CHAP.



He Artillerie whiche is to by conducted with an army, is to by comaunded by the Captaine generall, consideringe the executiones he doethe pretende, and the greatnes of his army, and the circuide they may occupie, they carie 30. or 35. canones of greate cice for batterie some more, sometimes lesse, accordinge the execution, some shoote a bullet of 45. 50. 60. 66. pounce, from 7. to 8. inches in heighte.

15. Haulfe canones from 25. pounce bullet to 30.

16. Culverines from 16. to 20. pounce bullet.

26. Demy Culverines.

25. Falcones and falconetes.

82.

Greate store of cannon-pouder, and alsoe a goode quantitie of pouder, for smale shott, a store of leader bagges to carie pouder behinde men a horsebake, when any sodaine occasion soe requireth, hides to cover the pouder in the cariadge of the same, pices of chaines and broken yron, cartages full of musket bulletes to shoote oute of greate ordenance in the fronte of a battel, or any order of men a prochinge neere to execute thire intente: In suche and semblable occasions the aforesaiede instrumentes bienge well handled by goode and skillfull Canonieres in due time, are of wonderfull executiones, and do putt the enemy in mightie terron, in many occasions by sea and lande, greate quantitie of bulletes for youre greate ordenance, and goode store of match, and bulletes for the smale shott, a store of mattocks shoules and pickaxes, hatchetes, and axes to cutt woode and fagotes, and a store of wood houkes, a store of planks, and peeces of timber, whiche may serve for many purposes, greate store of baskets to carie earthe to fill the gabiones and cover the smale shott in tranches and fortificationes, sledges and yron barres to breake rockes, greate and smale sawes, laddes of brace and theyre staufes, sponges, ramers for eache sorte of the greate ordenance; greate store of nayles

A

	7	11	8	n
Can	0001	0002	0003	0004
Can	0005	0006	0007	0008
Fre	0009	0010	0011	0012
Dem	0013	0014	0015	0016
Dem	0017	0018	0019	0020
Dem	0021	0022	0023	0024
Cul	0025	0026	0027	0028
Ord	0029	0030	0031	0032
Dem	0033	0034	0035	0036
Dem	0037	0038	0039	0040
Sake	0041	0042	0043	0044
Sake	0045	0046	0047	0048
Fau	0049	0050	0051	0052
Fau	0053	0054	0055	0056

*A Table for to finde oute the names of the greate ordenance now
height of their bullettes, and theire weights, the compass of the
ordenance, lenght of the same, their thicknes, lighth of their
each peece, and the number of horses requisite for to drawe the
of paces eache greate peece shootes at utmoſte random, the leng*

<i>The names of the peeces of greate orde- nance.</i>	<i>The height of the dia- meter of e- verie peece in enches and partes.</i>	<i>Heighte of the bullet in inches and partes.</i>	<i>WVeight of the shot in poules and partes.</i>	<i>Compas of the shot in inches and partes.</i>	<i>WVeight of corne pou- der due to charge eack peece in pou- des.</i>	<i>WVeighte of the peece in poules.</i>	<i>The lengthe of the peece in feete.</i>
Cannon.	8	$7\frac{1}{4}$	64	$25\frac{1}{2}$	32	8000	12
Cannon serpentin	$7\frac{1}{2}$	$7\frac{1}{4}$	52	$23\frac{1}{2}$	26	7000	$11\frac{1}{2}$
France Cannon.	$7\frac{1}{4}$	$7\frac{1}{2}$	$46\frac{1}{4}$	$22\frac{1}{4}$	23	6500	12
Demi canō eildeſt	$6\frac{1}{2}$	$6\frac{1}{4}$	$36\frac{1}{2}$	$21\frac{1}{4}$	20	6000	$11\frac{1}{4}$
Demi canō ordin.	$6\frac{1}{2}$	$6\frac{1}{4}$	32	$20\frac{1}{2}$	18	5600	$10\frac{1}{2}$
Demi canon.	$6\frac{1}{4}$	$5\frac{1}{4}$	$24\frac{1}{2}$	$18\frac{1}{2}$	16	5000	11
Culveringe.	$5\frac{1}{2}$	$5\frac{1}{2}$	19	$17\frac{1}{2}$	$15\frac{1}{2}$	4600	$13\frac{1}{4}$
Ordinari culver.	$5\frac{1}{4}$	$5\frac{1}{4}$	$16\frac{1}{4}$	$16\frac{1}{2}$	12	4300	12
Demi culveringe.	$4\frac{1}{2}$	4	$11\frac{1}{4}$	$14\frac{1}{2}$	9	3000	11
Demi culveringe, ſomvvhat leſhe.	$4\frac{1}{4}$	$4\frac{1}{2}$	9	$13\frac{1}{4}$	$7\frac{1}{2}$	2300	10
Saker ordinary.	$3\frac{1}{4}$	$3\frac{1}{2}$	6	$11\frac{1}{4}$	5	1900	$9\frac{1}{2}$
Saker or minnon.	$3\frac{1}{4}$	$3\frac{1}{2}$	$4\frac{1}{4}$	$10\frac{1}{4}$	$3\frac{1}{4}$	1100	8
Faucon.	$2\frac{1}{4}$	$2\frac{1}{2}$	$2\frac{1}{2}$	$8\frac{1}{4}$	$2\frac{1}{4}$	750	7
Falconet.	$2\frac{1}{4}$	2	$1\frac{1}{4}$	$7\frac{1}{4}$	$1\frac{1}{2}$	400	6

Some used for offensive and defensive warres, the height of their diameter or the same, weight of the powder required to each peece, the weight of each peece of laddells, and the breade of the same, the number of men sufficient to drawe the same, the distance of paces each peece caryeth at point blanke, the distance of the coyle rope requisite for to drawe each peece.

Thicknes of the mettall at the mouth hole in inches and partes.	Thicknes of the peece at the neck of the same.	Lengthe of the laddell in inches and partes.	The breade of the laddell.	Lengthe of the plankes of the cariage in feete.	The number of men sufficient to drawe each peece, when neede require.	The number of the horses requisite to drawe each peece of ordinance.	Distance of paces the peece caryeth at point blanke.	The distance of paces each great peece shooles at moste random.	The lengthe of the coyle rope requisite to drawe each peece.
8	4	$23\frac{1}{2}$	15	$16\frac{1}{2}$	90	16	300	1500	70
$7\frac{1}{2}$	$3\frac{3}{4}$	22	$14\frac{1}{4}$	$16\frac{1}{4}$	80	14	340	1600	66
$7\frac{1}{4}$	$3\frac{3}{8}$	21	$13\frac{3}{4}$	16	70	12	360	1740	64
$6\frac{1}{4}$	$3\frac{1}{8}$	22	12	$15\frac{1}{2}$	65	11	370	1800	60
$6\frac{1}{2}$	3	20	$11\frac{1}{2}$	15	60	10	350	1700	54
6	$3\frac{1}{2}$	21	$11\frac{1}{2}$	16	56	9	340	1600	46
$5\frac{1}{2}$	3	22	$9\frac{1}{2}$	18	50	8	420	2100	40
$5\frac{3}{4}$	$2\frac{3}{4}$	21	9	$17\frac{1}{4}$	46	8	400	2000	36
$4\frac{1}{2}$	$2\frac{1}{8}$	20	$8\frac{1}{2}$	$16\frac{1}{8}$	36	7	380	1800	34
$4\frac{1}{4}$	$2\frac{1}{2}$	$19\frac{1}{2}$	$7\frac{3}{4}$	$14\frac{3}{4}$	28	6	320	1600	30
$3\frac{3}{4}$	$2\frac{1}{8}$	$16\frac{1}{4}$	$6\frac{3}{4}$	14	24	5	300	1500	28
$3\frac{1}{4}$	2	14	$5\frac{1}{4}$	11	20	4	280	1400	24
$2\frac{3}{4}$	2	12	$4\frac{1}{2}$	$10\frac{1}{4}$	16	3	260	1200	20
$2\frac{1}{4}$	$1\frac{3}{4}$	10	$3\frac{3}{4}$	$8\frac{3}{4}$	10	2	220	1000	20

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Date		Description		Amount	
1871	Jan 1	Balance		1000	00
1871	Jan 15	Received from A. B.		500	00
1871	Feb 1	Received from C. D.		250	00
1871	Mar 1	Received from E. F.		150	00
1871	Apr 1	Received from G. H.		100	00
1871	May 1	Received from I. J.		75	00
1871	Jun 1	Received from K. L.		50	00
1871	Jul 1	Received from M. N.		25	00
1871	Aug 1	Received from O. P.		12	50
1871	Sep 1	Received from Q. R.		6	25
1871	Oct 1	Received from S. T.		3	12
1871	Nov 1	Received from U. V.		1	56
1871	Dec 1	Received from W. X.		0	00
1871	Dec 31	Total		1587	56

nayles litle and greate, coradge of smale sortes, horse sheowes and horse nayles, litle and greate bandes of yron for the whiles, and spare whiles withoute faile, lanternes and store of candles, for Carpenteres to wourke at night time when necessitie soe requireth, talowe and tarr for the whiles, torches, wax, candeles, scalinge leaderes, a quantitie of musketes and pikes; A store of compositiones and mixtures for fire-wourkes, saltpiter, camphora, solfer, armoniacke, sal gema, colofonia, rosin, red wax, stronge brandevin, a quantitie of o cam, smale cordes, and yron wires, giniper oyle, linseede-oyle, turpintin non preparata: The saltpiter used for fire-wourkes is mooste commonly refined three times, of thies mixtures there needeth no greate quantitie because that they are seldom used and besides they are verie costly and fewe can by founte for there due orderinge for severall executiones.

To drawe a cannon of greate cice in faire weader is required 18. or 20. horses, sometimes more if the situation by not goode, but in foole weader is required 24. horses, sometime more if the situation by not goode, thies horeses is to by chosen both greate and stronge, for a demy cannon 12. or 16. horses, in foole weader 16. or 18.

A stronge and goode wagon will carie 70. cannon shott and of otheres of leshe sieze acordinge to that rate, to the drawinge of which is required 4. or 6. horses, and acordinge to that weight are all the other wagones loaden, with pouder and other munitiones, bridges, barckes requires more horses acordinge to the greatnes of the loade.

For the manadginge of thies amunitiones, and of the greate ordenance is required many men, amonght the which it is mooste necessarie that theyre by goode and experimented Carpinteres, Canonieres, Gentlemen of the Artillerie to governe and conduete the same, prudently. A Contador, Mayor domo, Pagador, Comesaries or muster masteres, a harbinger to whose chardge, is 250. horse, and a provoste over the horses that carries the Artillerie, some Smittes and many pioneres or wourkmen, to make tranches rampares, mines, and contra-mines to make plaine and eiven bad pasadges, that the greate ordenance may pass, skillfull Ingenieres to under-mine walles of townes, and fortreshes; to digg welles for water, over thies pioneres are a pointed Captaines to governe and comaunde them, which of necessitie oughte to by experte in fortificationes, contramininge, trinchinge, and knowinge who to manadge ingines of fire-wourkes to burne boates shipes, or any suche combustable thinge, and in knowinge

winge the compositiones fitt for them, and who to make them.

There oughte to by one of perfecte skill for a condestable or Master gunner to governe, comaunde, instructe, oversee, and examine all the reste gunneres, and to by verie carefull to see that they doe theyr dutie, and knowe who to a complish with theyr obligationes, for some rawe and unexperimented men do undertake the charge of a gunner who knoweth juste nothinge: Theyre oughte to by instrumentes to take the leavelles, ingines to monte and dismonste all fortes of ordenance.

The Generall of the Artillerie, as a superior commander, oughte to procure and take a speciall care in due time to see all matteres provided and put in order, rather then to thincke theruppon, when occasion shoulde presente, and specially in the lowe countries, where warres are dayly in exercice, and sundrie interprises, and brave exploit-tes executed of a sodaine. He is to get a liste of all fortes of amuni-tion-ones and armes, as well defencive, as offensive both for foote and horse, givinge order and chardge of the same, to the Mayor domo, the which they oughte to give oute by librances or ticketes, from the Generall, because that goode a compte may by yealdeth of provisio-n-ones of suche greate importance, in as much that no fraude mighte by suspected: When occasion shall offer to plante youre cannon or grea-te shott, to batter a cittie towne foote or castell, or any other pcca-sion.

And pretendinge to effecte well youre purpose, youe shall place them by 5. 6 7. 8. as occasion shall require, a leowinge a certaine di-stance betwexte every two peeces, acordinge as the occasion and si-tuation shall require or permit, firste orderinge the place where they shall by put with planks or tables all a longste under their whiles, a leowinge 7. foote litle more or less behinde theyre whiles, for the re-tiring of the peece, soe that of it self, or with litle paines it returnes a gaine to his due and former place; And alsoe before the Artillerie is to by set a resistance of tables, betwext it and the gabiones and para-pet, and soe of a newe begin to chardge it. And when the Artillery bi-gines to be hott, it is not to by refreshed with vineger, but rather weathinge the trimer in water, and with the same to reffress the cane or barrell.

This observation beinge fullfilled in due time youe may still shoo-te of, if occasion require: It is alsoe to by considered the thicknes and mettall, advertisinge that the Masteres of the ordenance doe a leowe

no more then 40. or 50. shot a day, if the occasion by not of suche importance.

He who taketh this honorable charge in hande oughte to by skillfull in the arte of warr, and of greate care in givinge all orderes and instructiones in due time, and see that with greate care and punctualitie his orderes be observed. He oughte to knowe the names of every peece, and theyre severall weightes lengthes bignes, and the iuste boare of the cylender, the waighte and thicknes of theyre bulletes, the quantitie of powder necessariq for every peece; their beste advantage att pointe blanke, the difference and goodnes of theyre powder, the laddels, sponges, and rammeres necessariq, and bestinge for eache one, theyre ought to by bulletes and a rowes of wilde fire.

It is still to by considered the goodnes or badnes of the powder, for the powder beinge goode the lesser will serve, and is of farr better execution, and doth less heate the peece: To knowe who much powder youe oughte to a lewe to eache peece, take in powder the waighte of the 3 partes of the bullet, and soe with all sorte of ordenance of whatesoever cice; as for example a cannon of 66. pounde bullet requires 44. pounde of powder, which is the 2. of the waighte of the bullet, and soe with the reste. The laddell beinge filled two times is the righte charge of each peece, but that consideration oughte to be taken in the goodnes of the powder and peece, uppon the powder and Artillery ought alwaies to be a pointed a goode and vigilante watche, soe that no fraude may take effecte, in maylinge the ordenance, or givinge fire to the powder, both foote and horse ought to garde the same if neede require, and specially goode roundes.

The setinge, montinge, or placinge the Artillerie belongethe to the Campe master generall, or high Marshall of the fiede: Theyre oughte to by a speicall care taken that of all sortes of munitiones theyre shoulde by rather more to spare then that theyre shoulde wante, for two many goode respectes, for the more youe have allwayes to spare of powder, and other munitiones, the more honoure youe gaine and the quieter your mynde.

If youe shoulde chance to come to conqueste a foraigne countrie where youe are well assured to get both horse and foote, and beinge fullie resolved to overcome that countrie, and remaine in possession of the same, it is verie necessariq youe carie a longe with youe a greate quantitie of saddeles, bridles, spurres, and Masteres to make su-

che wourkes, and alsoe to carie a longe with youe a quantitie of many sortes of weapones and munitiones, which suche countries can not a fourde, and to take a speciall care that youe receive no men whiche mighte by suspected, for fidelitie is a precious guel of greate wourth, for nexte under God theyre is nothinge of so greate importance to a Prince as to have loyall subjectes, for trough theyre love and unitie, the fertilitie of the countrie, a companied with good lawes, goode discipline, prudente and brave conduction of his Captaines and Comaunders in warr, as alsoe a companied with thies saied a faithfull and resolyte determination of his Souldieres, who beinge exercised and experimented in warr is a wonderfull comforte securitie, and repose bothe to the Kinge and countrie.

THE FOURTHE CHAP.



When occasion is offered that a smale or greate number of Souldieres are besiedged in a citti towne forte or castell, where they are apointed by theyre Kinge or Generall for to defende the same, like faithfull and true subjectes, where rather they shoulde dye honorably in defence of the same then yealdeth it, excepte greate extreamitie, and goode reasones, constraine them therunto, and makinge notoriousse there prudence, valoure, and fidelitie; And if it shoulde chance to fall oute theyre comaunder or governoure of such a place trough a covardelie minde, or by meanes of sellinge the same for money to the enemy, and findinge that he shoulde presume to yealde the same to the enemy, litle regardinge his Prince is service, nor his owne reputation, and knowinge that such a place mighte be defended; They all with a brave resolution are to comforte the comaunder, presentinge theyre reasones that suche a place may be well defended, and at legh- te, findinge his minde yealde to the base acte, and seinge that reasones can persuaide not avayle. They are with a brave and resolute determination to say that to honoure theyre Prince, and mantaine theyre one reputation, that like unto faithfull subjectes and honorable Souldieres they rather chouse to dye in defence of the place, then yealde the same, till they knowe the will of theyre generall; And if the Generall finde no oportunitie to advertice them with answer, or in
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soucorringe them; They are with a brave and noble determination to proteste to die in defence of the same, with a resolute minde then yealde the same cowardly, estimating but litle the honour of their prince and their one reputation, and findinge that the Governor of that place will not agree but still goe forwarde in his base minde they may lawfully apprehende him, and electe another in his place, to whome they oughte to obey and respecte as if he were elected by the kinge or generall, protestinge to fulfill with him as a superior, and for the better performance therof to putt all their conclusions in writinge; soe that the enemy beinge informed of their valerous determination brave spirites and fidelitie, they shal hardlie fall upon them, but upon greate and extraordinary advantage, seinge that they are resolved rather to die in defence of their honour and reputation then to yealde or hazard their fame in renderinge the same to the hands of their enemy, whiche may use there one discreffion in a matter of so heaveie importance, in eyther gaininge honour or disgrace, so considerenge the difference betwext thies two pointes in the noble profession of armes, better and more honorable it is to die in defence of a iuste and honorable cause, and perpetuate their fame to all posteritie, then yealde to any lowe or base imagination.

When an army doe inter into a foraine country and determineth to remaine there that winter, and conquest the same, firste he is to fortifie him selfe, or com in possession of stronge places if it mighte by possible: Secondlie to gather all the corne cattell wine bire and all other sorte of vituales necessarie for the maintenance of his army: Soe that his may not wante, and that his enemy may be driven unto greate extremitie (and that trough meere extremitie they may come to offer them selves to serve as faithfull subiectes) so that of matters whiche bienge prudently and diligently managed doe often times resulte prosperouse and goode successes: A necessarie thinge in warr that the souldiores of eache army doe carrie their device and token wherby they may be knowne by their owne as frendes, rather then to fall upon as if it were an enemy not knowinge them as it may well fall oute.

When a generall of an army doth inter to conquiste a kingdom the provinces or places trough which he marcheth, he is to take care to leave them well fortified and sure, with goode and stronge garisones that his succours munitiones and convoyes, may with the better securitie pass and repass, for cause that importeh muche for the bet-
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ter securitie and goode success of his jurney and pretended purpose. And if by chance in suche places his convoyes by beaten or broken, as it may well fall oute, he may retire to the nexte adjoning forte castell or towne, for his securitie, and soe shall all sorte of trade, marchandise, munitiones, and traficke freely pass from place to place, conducted with stronge and vigilante convoyes both foote and horse. Suche persones as shall by chosen to renoledge citties townes, fortes castelles, theyre fosses and walles, and the places easieste to by won, as alsoe to renoledge the place more conveniente to cutt tranches. Thies persones oughte to be chosen of men of longe experience in warr, as well in the Theorick and practice of the same, ingenious and of a grtate spirite, of a setled minde to houlde and take notice of whate he seeth, the perill and danger of the matter, the necessarie preventiones for the same in as much as may be possible in takinge advantadge of the enemy; Some that are employed in thies occasions doe carie armes of prooffe and targetes, otheres do onelie carie targetes, whiche i thincke is inoughe, by reason of the greate weighte of both, such men are to arme them selves with a setled minde, not fearefull but of a brave spirit scilente and patiente, for otherwise hardly can they bringe to perfection theyre purpose, nor give a goode relation of whate is recomended to their chardge whiche by experience is often tried in the occurantes of warr.

When ocaſion shall offer to give an escalada to a towne citti or forte it is necessarie it by at nighte alitle before day, and in an obscure nighte alitle before day, and that to be verie scilent and secretly, and with greate expedition to execute his purpose, but firste and before hande oughte to be taken the heighte of the wall and place of youre execution, that the laderes may juste conforme with the place and that it be nothing higher for bienge dangerouse, for the parte within discoveringe him, with litle paines may turne the ladder and hinder the execution pretended, and the ladder oughte not to be soe shorte but it may come within two foote to the upper patre of the wall, or juste to the same litle more or less; for otherwile time and ocaſion may be losse, and the firste that are to by chosen for suche exploits are to be pikemen and chosen of persones of brave spirites and valerouse determinations to intertaine the place with their pikes till the shott do inter; and as the pikes do inter they are to turne their faces towarde both sides of the wall to kepe of the furie of the enemy till the shot do inter; And then the leader is to marche forward

de in goode order till he come to the beste poste of the enemy, and moſte fitt for his purpoſe, with a troupe of choſen and reſolute muſkettieres in the uanguard who diſcharginge that value giueth great terror to the enemy, and let them make their reckoninge before hande that there is no turninge backe, but with a brave reſolution ſtep forward with a ualeroſe determination, otherwiſe a thouſand to one they are loſte, for ſuche and ſemblable executiones is required prudente and brave conductores of tried ualoure and reſolution.

Nexte under god, true religion and pure conſcience, there is nothinge to be ſo highlie eſteemed and comended in the profeſſion of armes as obedience, accompanied with goode diſcipline and examples, for otherwiſe all other goode partes in him are to litle purpoſe and of litle eſtimation, yea and of what ſover qualitie or condition he be of, from a private ſouldier to a Maſter de Campe generall: alwaies the lower is to reſpecte the higher in degree (for the proſperous ſuccesſes of warlike afaires.) And it is moſte neceſſarie that thoſe who doth militate in the ſame doe ſerve with a goode, will cencelly and faith fully, ſheowinge them ſelves louinge and loyall, in all ocaſiones to their Prince, and Generall, whiche they are to ſheowe by testimony of goode examples, ſoe they ſhall be beloved and gaine goode fame, and by all likhoode ſhall have goode ſuccesſes: And many ſouldiores who bienge aſſured that their cheefe doth inbrace and recompence all brave actiones in warr, do venture them ſelves with a better couradge, and reſolute determination; Then if they were conſtrained by force, and of litle hope of recompence.

Iulius Caesar that famous Captaine of great renome who in all his actiones ſheowed him ſelfe with ſuche a generoſe minde and lovinge towardes his ſouldiores, accompanied with his military prudence did triumphe and over come in 52 battelles and incounters of great hazarde and difficulte, with the ſlaughter of 100000. perſones for the ſpace of eighte yeares he governed. Wourthie to be noted and kepte in perpetuall memory when he tooke his journey to paſſe over the river of the Rhine in germany to fall uppon the *Suitſeres*, to revenge the injurie and treaſon comitted by them againſte the republike of the *Romaines* in killinge *Cato* a famous Romaine Conſull, and all his people: But *Iulius Caesar* for a revenge therof gave them a battell, they bienge in number 290000. men; Norwithſtandinge he defeated 130000. of them, and they askinge for peace after that *Cesar* did overcome them he came to a grẽment and compoſition with them.

A nother thinge wourdie to by noted that when the Suitsers did pass the river of the Rhine, with 43000. men to inhabite, and overcome France, Borgondie, and Flandes. *Julius Cesar* heeringe of theyre presomtion, presentlie departed to meete them, and defeated and overcom them, and for the moſte parte ſuche as eſcaped the battell, for the greate renoome and relation they had of his brave government, and kinde intertainement, they were contente to remaine in ſervice under him, ſoe that trough his prudence, brave conduction, and the greate contentement ſouldiores had to ſerve under his comande, he did overcome all the Provinces of the Suitsers Fleminges, and France, and paſſed into Inglande and did put them under ſubiection, and after paſſinge over ſea, the Ingliſh begon to rebell againſte him, ſo that he was forced to returne a gaine to recover the, and leavinge them ſetled, wente into ſpaine and drived a way *Pompeo*, and maſtered all that he had under ſubiection: So that this laudable and renoomed Captanie leſte to all warriers many brave examples of perpetuall memory.

His brave and prudente conduction, liberalitie clemencie and mangnanimitie made him victorieuſe, ſo that he triumpheth over Asia, Africa, and Eutopa. And ſoe many more brave and valerouſe warriores for bienge beloved by theires, kepinge them ſtill contented, have optained manny rare victories. And to the contrarieo theſes who were of bad conduction, and careleſſe to contente theire Armies had but litle goode ſucces; As did happen to *Atila* kinge of the *Hunos* a proude and cruell man, an enemy and ſcourdge of criſtians, was overcom in the battell betwexte him and *Theodorico* Kinge of the *Burgonones* in the campe of *Cathalanos*, though he had more men then the *Burgonones* he was overcom with the loſſe of 180000 men, in whiche battell the Kinge *Theodorico* was ſlaine, many more comparifones mighte be related, but nowe a dayes the warres are ſo diferente in uſinge no tyranny, but rather by induſtry brave and prudente conduction goode diſcipline, dayly ſubtilitie engeniouſe wittes, inventenge of fire wourkes and other military actes in warr, to which helpeth muche the readinge of antiente histories of prudente and valerouſe Captaines to ſharpen the witt of men, and increaſe the hartes and underſtandinge of ſuche as do followe the noble profeſſion of armes: But let none preſume that by onely readinge he can be apte to governe in warr (in governinge of an army) nor truſte to the ſame withoute havinge exerciſed him ſelfe and

and practisinge him in many ocurrences of warlike affaires, but the learninge becometh none better then the souldior, for it bringes him to greate perfection, firmnes and auctoritie. Many Kinges Emperours and Captaine generallles do imbrace the letteres with armes and finde it moſte neceſſarie, and are of rare importance, and finde that learninge is moſte required to the executiones of this profeſſion more then to any other profeſſion, for bienge the true fundamente of nobilitie: In the profeſſion of armes the wicked vice of inuie is moſte odiouſe and uileſte of all actes; for bienge maſter of many vices which reſulte of rude and blinde ignorance, ſubjecte to quareles, murmuration, backbitinge, diſgraces and bad examples, enemy to all goode proceedinges, truth and vertue, whiche doth ſo penetrate the unconfiderate and baſe understandinge of many of litle conſcience and reputation, daylie decaiege and fallinge unto many crimes and diſgraces, enemy to frindſhipp and acorde, ſubjecte to afrontes and vices, of bad life and bad ende: In the profeſſion of armes greate care oughte to be taken of ſuche as are given to ſuche and ſemblable vices; and when by faire meanes and goode inſtructions they do not a minde to ſee them ſeverely puniſhed, or drive them a way, like baſe factioneres inclined to vices troubles and bad examples.

THE FIFTH CHAP.



Whoſoeuer woulde wiſh to be a perfecte ſouldior and deſirouſe that matteres of importance were refered to his care and chardge, firſte he muſte by exerciſed longe time in warres, ſheowinge him diligēte in a plenge him ſelfe in the theoricke and practick of this arte, to be couriouſe and ingeniouſe in many occurrantes and warlike exploitte, in fortiſenge him ſelfe in ocaſiones of neceſſitie eyther in plaine or hilly grounde, riveres or paſadges or where ſoeuer. He is to be couriouſe in understandinge the difficulties of the ſituation, the wantadge and diſadvantage of the place, and howe he may intertaine the place, in as muche as induſtrie can a fourde, in conſideringe how ſoncor can be kepte from him, and the neceſſary prevention, if he by invio-
rened with wood gardines ditches valeyes ould buildinges in 700.

or 800. paces, and if there be any suche impedimentes to see them with speede plained and prevented that he may discover every way, and let him looke well that he be not deprived of water, and in as muchie possible to informe him selfe in knowinge all meanes the enemy may use to cross him of soccours; and the sureste way or meanes who he may receive soucor, and use all industrie possible in so muche that the enemy do not cross him of the pasadges, and put themselves in possession of the same: He is to fortifie him selfe in as muche as may be possible, and as the situation shall permit, not grudginge at the greate paines required to that effecte, in raisinge the walles in the heighte and forme requisite, the ditch of the breade and heighte conveniente. To raise the bulwarkes of the same in the heighte that they may discover the sircuide and places besitinge on eache side, let him be provided in due time of all necessarie munitiones, and as much as may be, and rather have to spare then wante, alsoe to be provided of severall sortes of fire wourkes whiche are of rare empotrance in many occasions, let him be alwaies vigilante and warie, and feare of the suddaine plottes and stratagemes of his enemy, whiche may fall upon him when he leaste thinketh, so let him not wholie truste to his and his souldiores valour, but rather alwayes be readie to receive the alarme with greate vigilance and brave resolution, so shall he accomplish the obligationes of a prudente carefull and vigilante souldior, and defende his reputasion.

When any stronge place is besieged and that yove woulde cut atrince to win the same, the person that undertaketh this chardge muste by curiouse and skill full, the trince is to be five foote deepe and the earthe to be caste up on both sides then it shall be seven foote deepe in some places it is to be ten foote broade, in some places eighte, but in the biginenge it needeth not to be above eight foote broade, and in every place it muste be five foote at leaste deepe. Thies tranches are to be cutt and goe on crossed (and crouked) so that the enemy do not discover oure fronte, but givinge them still oure side, and so shall the companies inter with the better securitie and fewe men kilth, and they may goe upp and downe the trince at their owne ease, but they muste beware and be in all redines leaste the enemy shoulde chance of a suddaine come to trye their valour, and kill suche as they finde in the trince, and naye the artillerie if they can come so farr, therefore let there be chosen the beste and moste valerouse pikemen, and order them in thre in ranke to hinder the

the entinte or empetue of the enemy, in thies and semblable ocafiones in warr where carelehe Officeres and souldiores do afflite they finde them selves amazed for there litle care and vigilance in suddaine prevented exploites of the enemy, after bienge well informed of trustie spies of the litle vigilance and care of the enemy it is an easie thinge to triumphe victorie of them, so in occurantes and ocafiones of warrlike afaires all securitie is to by prevented in due time in as muche as industrie vigilance and care can asourde, and such as do not thinke uppon them selves to prevente the necessarie remedies, are mozte comonly losse, and suche as do escape remaine tatched with greate disgrace, for bienge overthrowen trough careless mindes and litle discipline, so let none by ignorant but that vigilance and care acompanied with military prudence and brave resolution is of rare importance in warr.

THE SIXTE CHAP.

Treatinge of the Office of a Captaine generall of an Army.

His office beinge of so high dingnitie and degree, the Kinge doth chuse and electe it be the advice of his prudente counsell of state and warr; and in this election greate consideration oughte to by had, for bienge the office of higheste degree in the fielde; which of all reason oughte to by comended to the care and chardge of a personadge indued with the besitinge partes for the executinge of so honorable a chardge: Therefore he oughte not onely to have the perfection and aproved partes of all other officeres under his comande; but to excell them all in experience, gravitie, policie, secrecie, temperance, valour constancie, vigilance, care liberalitie, and to by of brave and resolute determinations, preventinge and executinge in due time with care and prudence all thinges apertaininge to his chardge: To relate of all the goode partes in him it were tedious, for he is to by of suche perfecte judgements of all thinges which hath and shall by writen of this arte, so that the goode partes in him required are infinit.

He is not onely to by of perfecte judgements in excellinge all the

reste, but alsoe to by of a verteous life in givinge goode examples, as apaterne lighte and lanterne of all the army (soe that they may imitate him) for moſte comonlie averteous prudente and valiante generall will chuse valiante verteous and prudente Captaines and Officers; prudente and valerouse Captaines oughte to esteime verteous valiante and skilfull souldieres.

The accidentes of warr are so many that it altherethe the honour of some professores of this arte, excepte they by indued with singular vertue and constancie, which are founde but in verie feowe. Very many dificulties doe offer in the daylie occurantes of warr, but greate abilitie is requiered to see them prudently ordered; and hardly can a ny master be had of suche perfection, but that some times he muste err.

To relate in particular of the partes required in a generall it were tediousse, Wherefore i will name the foure princpal partes the Greekes and Romaines desired to occur in such personages; firste to be skillfull in the arte of warr, to be valiante and of brave and prudente resolution, to sheowe him selfe with greate gravitie and auctoritie, and to be fortunate in his suceſſes. If he be acompained with the partes and proprietie before declared it is inough, Nevertheless he haſe inough to learne.

For the better securitie and success of his army it is necessarie that his person be still well garded in all plases where he marches with his army. (And trough his valeoure and mangnanimitie) findinge that he is inclined to presente him selfe the firste in all dangeres, his consell of warris not to permitt him for many respectes, for bienge kilth or taken prisoner it were no smale matter. That besides it is an occasion to animate the enemye, and to disanimate oures, wherof greate consideration oughte to be taken.

The *Greekes* and *Romaines* for the defence and repose of their republike have chosen their Captaine generalles of souldieres of greate and longe experience in martiall actiones, wherby they mighte prudentlie governe and comaunde with full auctoritie and due respecte. And therefore they alwaies did chuse thies personadges of men of longe practice, greate experience in warr, and of reepe yeares and judgement.

It is true that *Alexander Magnus*, beinge but of yonge yeares begon to governe and comaunde an Army, and conquered all *Asia* and did put the worlde in amace. Somtimes it is moſte conveniente that

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Kinges and Princes in person be presente with theire armies for many respectes, thonge theire experience be not greate, but when suche ocaſiones do presente they carie with them the moſte anciente and experimented Captaines they finde as did *Alexander* of thoſe Captaines whiche Kinge *Philip* his father had for his Counſelers and conductores of warr. And as did Kinge *Philip* of Spaine when he elected don Juan de Austria for his Captaine generall, he appointed for his Lieutenante don Luis de Suniga the gran comendador of castilla.

And to the contrarie who infortunate hapened to don *Sebastian* Kinge of Portugall not to imitate thies renoomed examples of perpetuall memorie, in his infortunate and diſtressed journey made into barbarie, he beinge yonge and vnexperimented in warr whiche was cause of his and his armies perdicion, so that yonge Princes in warres oughte to have for theire Counſelers grave and experimented Captaines, none can denay but this Kinge was of a high conceite and of a moſte brave and valerous determination but by reſon of his yonge yeares and leſſe experience in warr, he wanted prudence for the due conduction of ſuch an honorable action.

In the honorable journey made by the famous and renoomed conquerour Kinge *Edward* the thirde into France, ſendinge his eldeſt ſon the Prince of wales for generall, Naminge for his Counſelers and Captaines the valiante prudente and renoomed Earles of oxforde warwick, ſuffolk and ſaliſbury, where at the battell of *Poytieres* they made knowne theire vnderſtable prudence and greate valour, that at lenghte they overthrew the whole power of france, and theire Kinge *John* and his ſon *Philip* were taken priſoneres, with very many of the frence nobilitie, to the Ingliſh is perpetuall glorie and fame.

Aniball that renoomed Captaine of perpetuall memorie was but very yonge when he began to governe an army, but he had for his Counſelers anciente and prudente Captaines, and was ruled and governed by them till he came to underſtandinge, givinge many famous battelles and overthrowes to the Romaines, till at the ende he was overcome with *Cipio Africano* that renomed Captaine of the Romaines.

The Captaine generall oughte to informe him ſelfe well of the forces qualitie and condicions of his enemy, if biſhops or rawe men, or olde and experimented ſouldiers, alſoe to be well informed of
the

the situation strenghte and forme of their citties townes, fortes, and stronge houldes, and of the convenienteste places to passe over thire riveres. Alsoe to informe him selfe of the situation of their camps, so that he mighte be the better prevented when occasion shall offer, alsoe to be well informed of persones of goode judgemente and truste of all the difficulties that maie hinder him, so that in due time he may prevente all necessarie prevenciones, and specially see that he trusteth the relatinge of thies and many more occasions to persones of greate fidelitie and truste and of goode understandinge.

When the Captaine generall shall inter to conquesse aforaigne country he is to indevoure with speede to put him selfe in pcession of the principaleste pasadges of riveres casteles and stronge places, and with speede see them well provided with all necessities, that thereby he may put the country under subiection, and that his amunitions and all other necessities may be transported with the more securitie from one place to another, and withe speede to see all places fortified in as much as can posible, where any parte of his army beinge constrained trough extreame necessitie may safelie repaire unto. For it faileth oute often times that the occurrantes of warlike affaires are subiecte to many disgraces, and may be when we lesse feare. Wherefore a prudente comaunder oughte in due time to prevente suche difficulties, which is the kea and securitie of his army, and specially to see thies places well provided with all sorte of amunitions, and to see that they be recomended to the care and charge of carefull vigilante prudente and valerouse Captaines.

When resolution is taken to scale any towne forte or stronge place, firste information oughte to be taken by skillfull and trustie persones of al difficulties which mighte be suspected or feared, as alsoe of the juste heighte of the walles that ladders may be made for that purpose, and not to be overlonge for bienge dangerouse for cause that the enemy may easilie turne them up side downe. Thies ladders are not to be so shorte but that they may reache to the place of their execution (for thies executiones moste comonlie are firste imploied pikemen of chosen and valerouse souldieres) to make way till the shott followe to socoure them, duringe whiche time they are to maintaine the place with greate valeoure till all the shott do ioyne, and then with speed goe forward, well and prudently ordered, and with a brave and resolute determination til they come in pcession and master the place, and strongeste watche they finde. In thies
and

and other semblable occasions there is no lookinge after, still goe forward with greate couradge and valeoure, whiche execution oughte to be recomended to the care and chardge of prudente and valerouse Captaines and chosen souldiores, which bieng so hitted uppon, greate expectaciones mighte be hoped of theire goode successe. And order oughte to be given that in paine of death no souldier shall stir oute of his order till the enemy be wholie vanquised and all thinges duly ordered and prevented.

Goode successes are often times obtained by meanes of military prudence care and diligence, wherfore it is necessarie the Captaine generall be verie industriouse in knowinge who to invente newe occasions of warr to diverte and intertaine the enemy when occasion shall require, and to corrupte them with money, for many ocurrences in warr it is necessarie to have many trustie spies whiche serve for many purposes, it is moste necessarie that thies persones by knowen for men of truste and fidelitie, for otherwise beinge of double dealinge they are moste dangerouse. In all occasions he shall atempte he is to be verie carefull and diligente, and to knowe the qualitie and condition of the enemyes commaunder wheader he be faith and inconsiderat or prudente and reposed in his actiones, and wheader he be a man of a high minde to come to the faste of armes, and to knowe the qualitie of his counseleres conductores and officeres, and of whate determinaciones, and to be well informed if his army be of bisones or rawe men or of anunciente skillfull and practised souldiores, and of whate naciones and of whate desingnes. A generall can helpe him selfe in many matteres havinge goode and trustie spies, whiche are to be verie well rewarded and paid for be their, meanes often tymes matteres of greate momente is prevented in due time, and to the contrary for wante of such trustie and carefull persones greate disgraces doe happen, and brave interprises losse, thies persones beinge of confidente truste care and abilitie is a greate repose of minde to the generall,

Moste necessarie it were that some Captaines and Alferises reformed of longe practice and experience in warr shoulde still assiste nexte his person, to informe of many matteres which doe occur unknowne to the Generall, and of greate importance to his majesties service, and which shoulde be prevented in due time. Thies persones for cause of there longe experience and a proved fidelitie in materes of warr shoulde rather be imploied then otheres ordinarily sente

with comifiones in vifitinge frontieres, fortificafiones amunifiones magafenes or storehoufes, and of verie many more ocasions of importance to the furtherance of his majesties service, and in givinge true relafion of the extreame neceffities of fouldiores for wante of the ordinary and inefcufable neceffaries ordained for them be the Prince in theire garifones as lodgings bedes, &c. And feinge that none do procure nor pittie them they run away from theire coloures which mighte be prevented in due time be meanes of faithfull and trustie relatores, to the better performance of his majesties service and repose of the comon wealth and poure inhabitances, it were verie necessary he shoulde have trustie perfones of good skill and understandinge in warr who shoulde in due time advertice him of many matters which doth occurr unknowen to him or his counsell, and verie necessary for his majesties service.

To by prevented in due time againste the poyfonous designes and practises of the enemy, it were moſte necessary to get faithfull and trustie spies to knowe the intentes of the enemy, and to whate ende they aspire, and to see thies spies well rewarded, so that with the greater care they acomplish the truste emputed in them, so that matteres of greate importance may by discovered and prevented withoute fafte of armes, onely with military prudence. His ceasless care and high conceite, ought never to be weery in toylinge after vertue, and to attaine with travaile care and military prudence the gloriouse issues of his deepe designes.

In thies oure later warres for the moſte parte all electiones goes by favor frindshipp or affection to the greate difcomoditie of his majesties service; wherfore the Captaine generall as a supream iustice over a whole army shoulde have a speciall care in informinge him selfe well in due time, to see a matter of so greate importance prudently prevented. It alsoe falethe oute that when the Generall Causes for a relafion of the Master de campos to reforme so many Captaines of eache regimete of eache nasyon to reforce other companies. In such and semblable ocasions, the Generall shoulde take a speciall care to by well informed, for cause that by dayly experience wee see thies afaires sinisterly handled; Reforminge those of greate service sufficiency and valoure, which is manifeste, and to no smale difcomodity to his majesties service, in the atemptes of many honorable enterprises and incounteres, and to the greate decay of military discipline. So that for wante of prudente conductores, many honorable

ocasiones are dayly losse. And that resultinge of the litle perfection of many officeres in military discipline. To see thees ocasioness and many more duly prevented, the Captaine generall for many wourdie respectes oughte to informe him selfe well, in as much that fauoure frindshipp nor affection may take place, but rather forward and aduance those of longe and faithfull service, prudente cariage, renowned actes and valoure. So that in the administration of justice he shall by reputed for one inclined to minister equitie and righte, as alsoe for one of greate digression and wisdom, And soe moste commonly by all reason the successes of military discipline shall prosper, to the greate renowne of the Prince, repose and furtherance of the common wealthe. Happy is the Prince and renowned is the Generall who in his electiones doe imitate the Greekes and Romaines, in electinge the conductores of theyr armyes of men experte and skillfull in the arte of warr, and moste commonly wise vertues and valiant Generall, will chuse wise valiant and vertues Captaines, of longe practice renowned actes and good examples; So with the assistance of the diuine powere (greate hopes oughte to be expected of their happy successes) as *Alexander the greate, Scipio Africano, Anniball*, and many more renowned warriours leste in withinge sufficient examples of the same.

The ende of the seconde Booke.

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THE
THIRDE BOOKE
TREATINGE
OF
FIREWOURKES
OF RARE
EXECUTIONES
BY SEA AND LANDE.

After which followes

A DISCOURSE
OF THE CONFINES
OF A KINGDOME;

And the goode lawes to by observed in the sa-
me, and howe it is to by fortified, and stron-
ge by arte, or by nature, or
by both.

THE
THIRD BOOK
TREATISE
OF
FIREWORKS
OF
EXERCISES
BY SEA AND LAND

After the Manner
A DISCOURSE
OF THE
OF A KING

And the good slaves to be
me and how it is to be
copy are of by the
by both

THE FIRST CHAP.

Treatinge of Patarres.

O charge a pattar to breake a bridge is required six pounce of powder, or six and halfe, and to breake stronge portes or gates, foure pounce, or foure and halfe, and for palisados two pounce, or two and halfe.

This pattares are to be charged of the finest and beste powder that can be had, whiche to do well for the perfecte execution of the same. Powder shoulde be made for itt of refined mixtures of saltpeeter and solpher, and at the charginge of the same it muste be well beaten, but not so much that the graine of the powder be broken, and when it is charged, the mouth of the pattar muste be very well stopped with a peece of tember (and wax) aboute the which on the outwarde parte, or about the mouth of the pattar muste be wrapped and tied a peece of canuas dobbed in wax, fearinge that water mighte come to touche the powder to hinder the execution of the same, if in case it shoulde chance faule into the water. (Advertisinge that the pattar is not to be wholie filled, rather to leave three or foure fingeres voyde, and to fill the moste parte therof with okum, and the touch hole is to be coated with a peece of waxe canuas, and well tied to the same for feare of water and fire.

The touche hole muste be filled with mixtures ready and quick to kindle fire, but sloely to effecte that the patardier may have tyme to retire after giving fire.

The compositiones required to charge a pattar.

For this purpose take three partes of fine and strong powder, five of solpher, eighte of refined saltpeeter, or eight and halfe, afterwards mingell all thies mixtures well together til yove incorporate them, and put to them a litle petrol oyle, so much that they incorporate together, and let them drie well in the sun, and beinge well dried, fill the pattar with the saied mixtures, for the tienge of thies pat-
tars

tares aforck with two teethes is esteemed the beste, and in tyme of execution to putt the same trough the eares of the pattar to fasten the same both with a chaine and corde.

When yove woulde surprise a ny place of emportance by scalinge pattar, or by meanes of any faulte in the walles of the same, wherby yove may easilie come in, or by intelligence or treatment of treason. If by pattar yove determin to win the same, yove muste firste by well informed of skilfull and trustie spies, or of persones of truste, of the strenght and entrie of the gates, batteries bridges, palisados, buckettes, and chaines of the bridges, the height and distance to come to the place of execution, and if the ditch by drie or with water, and who deepe and lardge, and if there be any forlorne centeries, or corpes de garde that may hinder yove, and in whate place they lay, and if theyr by any greate ordenance that may play on yove, and on whate side it layeth and in whate distance.

The place beinge well discovered, to effect youre entention, yove are to vse stratagemes to divert and ocupie the enemy another way. Juste aboute the tyme that yove are ready to execute youre desire.

The tyme beeingh well hit uppon, with oportunitie, and being well informed by trustie spies of no deceite nor fraude, fasilitateth much the interprice, which is moste comonlie alitle before day; at which tyme the centeries are moste laesie and have more desire to sleepe, becsides that the obscuritie helpeth much the interpricke and aprochinges.

When the pattares are to be planted to their execution betwexte the mouth of the same and the gate or bridge yove are to put a plancke of stronge woode, of two foote broade and two foote and haulfe longe and three foote distance from the place of execution, and if yove finde that the plancke be not stronge inough, you are to take two barres of yron and put them cros wise for the better performance of youte execution, and that betwexte the saide planckes and the place of execution, and to order all thies thinges in areadines with every thinge apertaining, before yove com to the place of execution. Greate consideration and curiositie is to be used be the engenious and skilfull person that taketh in hande this busines, in givinge fire to the same, whiche is easie and enfalible for suche as are of perfecte skill in fire wourckes but to otheres verie dangerouse.

THE SECONDE CHAP.

How to make a torche to endure a gainste the force of winde and raine.



Take of fine cotten threede, which is used for candles the one thirde parte, and the other two thirde partes of threede made of fine ocam, and make of this acorde as thicke as youre finger. Then take a quantitie of saltpe-
ter, and let it be finely stamped, and then tacke a quan-
titie of *Aqua vita*, and let the corde boyle therein a goode while till it
almoste be drie, then put into the same a litle quantitie of gineper oy-
le, and one parte of pouder, two of refined saltpeter, and one parte
of rosen; and corporate them all together, and let them boyle over a
soft fire till the corde be almoste drie, and turne the same often times
with much vigilance or it will kindel fiere if any extraordinary hett
come nere it. Beinge drie inough tacke it up, then take one parte of
wax, one parte of rosen, halfe parte of colofonia, one fourth parte
of linesatt-oyle, and so much of camphora, one parte of saltpeter
three times refined, one parte of pouder, and boyle all thies mixtures
together, and when they are well corporated dob youre corde in the
same mixtures as if youe were to make a candel, and after beinge dob-
bed in thies mixtures often times, set the candel a parte till it be drie
inough then let it be dobbed in wax, as youe doe other candels till
such time as it be of the thicknes youe woulde have it to be, then lay
it upp till it be drie, and in lightinge the same it will burne with greate
furie and force, and no raine nor winde can quince it, and it will yeal-
de a greate flame, and terrible noice, that the behoulderes will mu-
che admire at the same.

To trie who to reduce saltpeeter into water take three onces of rai-
ne water, and put it in a caldrō over the fire, and put into the same two
onces of saltpeeter well stamped, and let it boyle so longe till it come
to be water, whiche for many effectes of this wourke is goode, and
specially to guie more force to mixtures that are not in theyre full
substance and perfection.

To refine solfer and make it more stronge put into the same one

eighte parte of quicksilver, and $\frac{1}{2}$. partes of refined saltpeeter, and melte them over a softe fire till they corporate well, and after, takinge the same up and beinge alitle hote caste it into strong veneger, and within alitle while take itt up and it will be of full strenghte.

To discover the enemy at nighte when yove woulde fall to do any execution, cause aquantitie of fagotes secretly to be put in the moste convenienteste place for that purpose (that will give yove inogh light) en vsinge them in this maner followinge and also will indure longe.

Take agoode quantitie of rosen, and foure times so muche turpintin de Venetia, and haulse so muche of colofonia as yove take of roosen, and put aquantitie of the saied mixtures on each fagot and give the same fire with awad of okum, dobbed in poudre brandevin and turpintin, which wad beinge dried will presently give fire to the fagotes and yealde agreate flame and indure longe, and if yove will have it to indure longer put aquantitie of colofonia uppon the fagottes in the thickestste parte of them and the fire will endure longe inoghe.



THE THIRDE CHAP.

To arme tronckes or canes made for severall executiones of this arte, the figure of which canes youe shall see here followinge in this are made of lighte woode and are to be of two foote or two and haulte longe, and som shorter for cause of their weighte in time of execution.



Hies canes are hollowe within and made of lighte tember like the barrell of apeece of ordenance, and they muste by well bounde all rounde aboute with stronge marlin corde, fearinge leaste it shoulde splinter by meanes of the stronge compositiones, and mixtures put into the same, of whiche we will nowe treat. After yove have well tied the same alongste with the corde all aboute, yove may doabe or coate the corde in a mixture made of pitch and wax for the more securitie of the cane in keepinge it from water, and not to splinter. Which doubtles they will exepte they be well handled by men of goode experience, and practice in this arte, and let none presume that for the readinge of many goode bookes he cā bringe this wourcke to perfection, for it is of suche rare and deepe judgemente in the orderinge and measuringe in proportion of the seaverall sortes of mixtures required for the same. In the drienge and manadgeinge of them is required greate consideration, good skill, vigilance, and rare judgemente of longe exercice; wherof i have seene many dangerous triales bothe in the handlinge and executiones of this wourcke, in his due measure and proportion, therfore consideration, care, and vigilance is required.

The compositiones required for the saied canes, take six partes of musket powder, foure, of solfer, a hault parte of quicksilver, one parte of cristal glasse beaten into powder, one parte of armoniacke alsoe beaten into powder, one parte of camphire, three partes of saltpeter three times refined, two partes of rosen, all whiche cause to by well stamped and mingled together, then tacked of gineper-oyle, or petroll oyle, as much as will wet a litle all the saied mixtures, then put as much stronge brandevin, as shall be sufficiente to weate well all

the saide mixtures, and mingel them together, and let them be dried in the sun or over a softe fiere till they corporate well, then putt amongst them a litel quantity of fine cotten made or a noited in fine beaten pouder and gineper oyle, and when all thiese compositions are drie, fill youre cane or troncke, putinge in the bottom of the same three musket-shotes of pouder, or more, acordinge to the greatnes of the cane, then a quantitie of youre mixtures then a litle pouder, then mixtures, then a litle pouder, and so till youe almoste fill the cane to the brim, leauinge two enches emptie where youe shall put drie mixtures quicke and apte to kindel fire, and haulfe, a quarter of an once of fine pouder in the very mouthe of the cane, and stike into the same a peece of match made of fine cotten, and boyled in *Aqua vite*, gineper oyle, and fine pouder of the beste youe can finde, to presently kindell fire, when occasion shall require; And when youe will bigin with the execution of the same, youe are to give fire in the mouthe of the cane, and it will yealde a moste furious and greate flame till it burne oute, and the execution of the flame will reache some 12. foote, and with a greate furie and force, which artificiall canes are excellent to inter per force into shippes, or into a breache or trinche, alsoe it is moste excellent to breake any order or array, and specially in narrowe or straighte places, as the draught marked with the letter A. sheweth.

A.



THE FOURTH CHAP.

Another way to arme artificiall canes of fire-worcke.



Take three partes of rosin, two partes of brimstone, one haulfe parte of the grease or fatt of a hog: parte of red wax, cause the rosen and brimstone to be beaten into pouder, and mingell them together. Then put to them the grease, and red wax and put them over a softe fire in a caldron, or earthen pott, stirringe them still til they corporate well, and remaine a goode while over the fire: Then take five partes

res of serpentin poudre of the beste, and of saltpeeter three times refined three partes, whiche muste be beaten to poudre, then take two partes of camphire stamped, then one parte of cristall glasse, whiche muste be beaten into fine poudre, alsoe one parte of armoniak whiche muste be beaten into poudre, all which yove shall putt into the saied mixtures, and let them all boyle over a softe fire till they be well corporated and dried, or if yove will tacked them up when they are well corporated and reasonable drie it importeth nothinge, by reason they are quick to kindle fire, and required not over muche drieinge, and if yove finde that the mixtures be not well wet that they may the better corporate, put a litle a qua vite or petroll oyle or of bothe to them, till yove see that they be very well corporated, he that undertaketh to make any store of thies Fire-worckes muste make up a furnishe for the beater securitie of the same, for puttinge the mixtures in caldrones or pottes over the fire as many do, it is dangerouse excepte it be handled be one of perfect skill and greate vigilance whiche I have often times tried.

For the fillinge of youre artificiall canes or tronkes with the aforesaid mixtures, needeth much consideration and practice, for the perfecte execution of this worcke. Put in case it is a cane where a boy is armeean inter into, yove muste fill it as foloweth but if greater or lesse consideration muste be taken in fillinge the same with the mixtures in measure and proportion, or it will faile in burninge all of a sodaine or verie soe so that greate practice and curiositie is required for the perfecte handlinge of this worcke.

For the fillinge of the saide canes before spoken of put into the bottom of the same two handes and haulfe full of musket poudre, then three handes full of the drieest mixtures, then two handes full of poudre, then foure handes full of the mixtures, then a litle poudre, then five handes full of the mixtures, and soe still in this course, till youe fill youre cane within three eatches of the mouth of the same, which youe shall fill with verie drie and quick mixtures apt to kindle fire, and on the upmoste parte or mouth of the cane lome poudre. That don take a peece of matche made of fine cotten, and sod in *Aqua vita*, gineper-oyle, and fine beaten poudre, and well dried, in the sun or over a softe fire till it be verie well dried of this matche cutt three enches and sticken itt into the mixtures that is in the mouth of the cane, and when youe are ready for youre execution do but give fire with youre ordinarie matche to this gunpow-

der matche, and presently at the firste touch of youre ordinary match, or of any other fire it will instantly kindle fire: Advertisinge that youe are to cover the mouth of the cane with a peece of stronge parchmente, and binde it well, so that the mixtures may not faule oute of the cane, the veri end of the match muste a peere trough the saied partchment to give it fire, when occasion shall require, and then the cane shall presently begin to wourcke with greate furie and terrible to the behoulderes, for the wonderfull flame and terribel noyce.

I have seene trial made often times that theyer is nothinge that putteth one in more terror then thies instrumentes, beinge well made and duellie handled; and doubtles the flame and noyce of this fire will put the enemy in greate terror, when it bigines his course of execution, and none so valiante durste stay neere it as longe as the flame indures, and questionles it will make a way as farr as the haulfe pike and flame can reache though ever so valiante youre enemy be, and it is a moste excelent instrumente to bourde shippes per force, or to give fire to theyre mines if youe perceive where the same doeth laye, advertisinge that the saide cane shall shoote of two shottes one after a nother, the firste that layes in the thirde degre, and the other that layes in the bottom.

Thies canes can be made severall maner of wayes be such as are curiouse in the manadginge of this arte, whic none can bringe to perfection, but with longe practice, and muche chardges, be reason the compositiones and mixtures required for the same are wonderfull deere, so that for the saide respectes hardely can youe finde one in ten thousand that will undertake the executinge of this wourcke; may be some will that are curiouse in readinge many brave Auctores, thinckinge that onely by the same they knowe inough, they are farr deceived, for i knowe that withoute practice they shall fall into very many errores, wherof i have seene verie many triales made, and besides greate chardges before they could come to the perfecte judgemente of the deepe secretes and curiosities of this rare arte.

Thies canes or tronckes of fire-wourcke, are handled severall maner of wayes be such as are curiouse; for some are of quicke executiones, otheres of slow acordinge as the ocase shall require, in puttinge to the mixtures agriable for that purpose, some yealde a flame of 16. foote but thies indures but verie shorte, otheres yealde a flame of 12, or 13. foote, whiche indure longer, whiche are made for sodaine executiones, otheres are made which do yealde a flame of 9. or 10. foote,

foote, whiche do indure lōge i nough for any sodaine exploite, for thies are made for suche executiones: Suche as doe not indure a bove the 1/4 parte of a quarter of an houre wil almoste wholly burne the cane, & meane all the inner parte of the same, suche as are made to indure haulfe a quarter of an houre will wholly burne the cane into a eish- sees as faste as the mixtures or compositiones do burne. So any body may perceive that thies compositiones are of wonderfull force, and of rare executiones, whiche questionles shall foe by founde by such as will take the paines and chardges, to make triall, and beinge experte in the due handlinge and manadginge of them. Thies mixtures are to bee putt in canes made, like the figure folowinge marked with the letter B.

B.



THE FIFTE CHAP.

Artificiall bullettes, and cross barres made of fire-wourke, to shoo- te oute of greate ordenance to burne shippes or houses, or to be shot into magasens or munition houses of the enemy oute of greate ordenance, or to be shot into the enemyes campe to bur- ne theyre quarteres, whiche are to be made and ordered in this maner folowinge.



Ake foure partes of saltpeter thre tymes refined, of brimstone two partes, of camphire one parte and haulfe, of rosen two partes, of armoniak one parte, of cristall glash beaten into poudre halfe a parte, of bay faulte one fourth parte; all thies compositiones bein- ge beaten into poudre mingle them together, this beinge don take one haulfe parte of the fat of ahog, of turpintin one fourth parte, of linsat oyle so much more, of aqua vite one parte, then putt thies mixtures together over a softe fire in a caldron or stronge earthen pott, and mingel them altogether till they corporate very well, then when they

they are a goode while over the fire put to them six partes of serpentin-pouder, and corporate them well, and when youe finde that they are reasonable drie take them upp, and make a plaster or cover of oecam, so thick as the backe of a knife, and so broade as shall cover the bullet or cross barr. All that beinge ordered as before declared take 4. partes of serpentin-pouder of the beste, and cause it to be beaten into pouder, take of refined saltpeeter two partes, of rosen two partes, armoniacke one parte, brimstone one parte, all which muste be beaten into pouder, then wet thies mixtures with two partes of stronge brandevin, or *Aqua vita*, one parte of gineper-oyle, one parte of turpintin, haulfe parte of linsat-oyle, that don put over the fire the rosin, brimstone *Aqua vita*, the gineper-oyle, the turpintin and linsat-oyle a bove mencioned, and when they are melted, and well corporated putt into the same the saltpiter, armoniack, and foure partes of serpentin-pouder, and corporate all thies mixtures together, and a noynte the twoa in them till youe finde it full of the substance of the same. Then let the ocam be all over covered with the firste mixtures made for the bulletes aboute a finger thicknes or more; alwaes tackinge regarde that it doe agree with the peece oute of which youe entende to shute the same, and when the coate of the saied bullet is covered, and full of the saied mixtures, then wrappè it rounde aboute the bullet, or cross barr, and tee it very well with stronge marlin corde, and benge well bounde with the saied corde, and shott oute of a peece of ordenance it will burne with terrible force, and greate furie, and water can not quince it, of the which for curiositie as alsoe to knowe of the operation therof i made severall triales.

Thies mixtures needeth not much drienge when they are well corporated over a softe fire, but the outwarde plaster of twoa of the three, wherewith youe are to cover every bullet, and in suche sorte that presently it may kindell, and give fire to the inner cōpositiones, to the which when youe give it fire, it will burne with greate force.

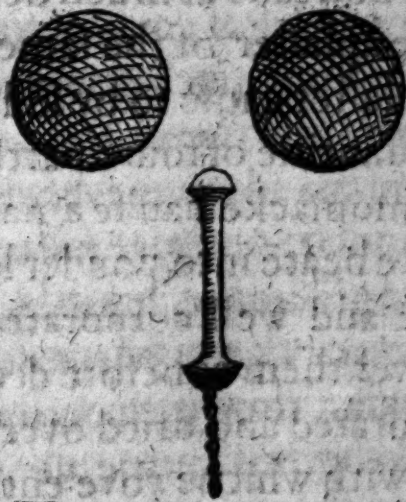
Thies bulletes are excelente to burne shippes, and to by caste into townes to burne houses, theyre execution is of suche wonderfull force that questionless they will burne an oaken boorde, and if youe caste water uppon them the more they will burne, and will make suche a wonderfull noyce able to putt the behoulderes in greate terror, and specially suche as have no understandinge of theyre operation, for when the water is caste uppon them they shall give a greate crie juste as if it were of a wilde boare, wherof i made severall triales

wour-

wourdie the lookinge uppon, and none of the behoulderes of the same durste stay neere in a greate distance for the strange operation of the same, and the terror whereunto they put the behoulderes but such as knowe of the course of theyre operation, whiche is almoste incredible but to suche as are acquainted with the same.

For the better execution of the cross barres and specially be sea they shoulde be made with yron chaines fastened to the end that firste muste by put into the peece whiche is moste excelenste to cut sayles of shippes ropes mastes, and to make other greate spoyles, the figure of whiche yove see heere folowing where the lette C. sheweth.

Thies cross barres are to be coated as before taughte and with the selfe same mixtures, the bulletes are alsoe to be coated takinge regarde that the bullet be made no greater but that it mighte inter into the peece of ordenance oute of whiche yove meane to shoote the same. And they are to be doble bounde all rounde aboute very well with stronge marlin corde, fearinge that be the greate force of their roaringe and wrastringe oute of the peece the ocam and compositiones, beinge not well bounde shoulde be untied, and tacke no effecte, which questionless it will excepte it by verie well bounde as before declared; of the whiche i caused my selfe triall to be made. The figure of thies bulletes and cross barres yove see hire marked with the letter C.



A a

THE

THE SIXTE CHAP.

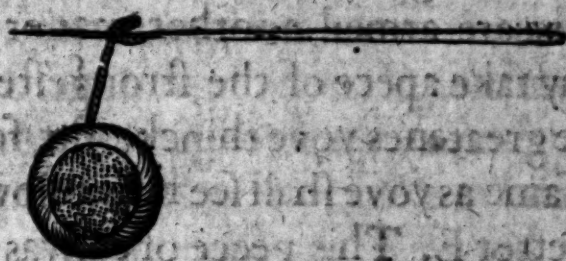


O arme a haulfe pike with fire-wourcke to inter of bourde shippes per force or to inter into a trence or baterie or breake any order or array where the balles fastned to them shall fall, thies balles are to be made of lighte woode of the bignes or somwhate greater then abuter box, and of the very selfe same makinge, but that it muste be bored with foure holes crosswise, and of the greatnes that youré thom might inter into them, whiche shall by filled in this maner followinge.

Take of the same mixtures and compositiones that was ordained for the artificiall canes to whiche youe are to ad two partes of rosen and one parte of brimstone of the beste, and melt thies together putinge alitle *Aqua vita* to them of the strongeste yove can finde, and bienge well corporated and molten, put the other mixtures over the fire and when they are hote put the molted rosen and brimstone to them, and corporate all together, and beinge almoste coulde fill youré artificiall balles therewith as full as they can houlde, putinge a litle of the drieste mixtures and pouder in the mouthe of each hole of the foure, and alitel cotten boyled in gunpouder, brandevin and giniper-oyle, and afterwarde dried verie well, that therby they may presently kindel fire. That don take as much ocam or towe as will cover or coate them, makinge a plaster of the same of a haulfe ence thik or litle lesse, this coate or plaster cause to by sod over asofte fire in fine beaten pouder to the quantitie of foure partes, of saltepiter two partes, rosin two partes, armoniacke haulfe a parte, brimstone one parte and all thies beinge firste beatē into pouder let them be wet in brandevin and giniper-oyle and well corporated together, then take as much ocam as will cover them as before declared, and when all thies mixtures are well corporated and dried over asofte fire, then spread them uppon the ocam with whiche yove entende to coate youré ball and put on the same to the thicknes of haulfe anence or litle lesse of the saied mixtures and wrapp the same rounde aboute the ball and let it be tied verie well with marlin corde, and when all this is don take apeece of gunpoder matche beinge well handled and dried, and binde it in severall partes of the ball that in touchinge the same with youré

your ordinary matche it will presentlie kindell fire, and without delay and it will begin to burne with amoste wonderfull flame and terrible noyce that it will put the behoulders in greate terror; and if it fall uppon abourd or any other thinge apte to kindle fire it will burne it into acishes, and alsoe the cover that goes aboute the same: the terror wherunto thies balles do put the behoulders of them when they burne is vncredible but to suche as do see the same, wherof I made severall proofes and founde it soe that no boddy durste stay neere, thies haulfe pikes somtimes are armed with skubbes made of fire worcke which alsoe are goode to offende or defende, thies balles and haulfe pikes are of rare executiones which draughte yove see hire vnder marked with the letter D.

D.



A prudente and brave conductor of aforecaste consideration, bieng determined with military prudence, and resolution of his and of his souldiores valoure to fall on any execution mooste comonly they are wonte to have goode sucesse, to which effecte many stratagemes and military prudence is required. And bieng in the fielde and resolved to give battell or at leaste to dommadge or put the enemy in greate terror; Verie necessary it were to be provided with the bulletes cross barres and yron chaines armed with wilde fire to by shute oute of greate ordenance, the which in suche occasions, as also in sea services are of rare executiones bieng prudently armed and managed, by one of perfecte judgemente and longe practice in this arte. Thies bulletes or cross barres bieng shoote oute of greate ordenance in the fronte of a battell or of an army in a reasonable neere distance are of wonderfull executiones, and specially yron chaines and cross barres. They are alsoe goode to cut the tackle of shippes shroudes mastes yarde top mastes sailes, &c. The draught of which bulletes yove see hire folowinge where the draughte with the letter A. sheweth. And howe to chaine them together when yove put them into apeece of ordenance.

And the draughte with the letter B. sheweth howe the same flieth trough the ayre when it is discharged oute of apeece of ordenance, and who it spreadeth a sonder, in some executiones they are armed with artificiall fire-wourckes to burne townes, shippes, the quarteres of the enemy as also theire store houses or magazenes whiche cross barres are envented for that purpose and bienge prudently handled and armed by one of perfection in fire wourckes i am asured that if they fall into any thinge apte to kindle fire withoute delay they shall burne and kindell fire, for often times imade triall of theire operation and vncredible force and terror and often times to trie theire nature and course of theire execution i caused to caste water uppon them, notwithstandinge they burne with the more vehemence and terror, and when the water is caste uppon them they give suche aterrible noyce wourdie the admiringe and burne with suche force.

Thies haulfe pikes are armed another maner of way with fire-wourcke, that is to say take apeece of the strongeste canuas yove can finde as big, or of the greatenes yove thincke fitt for youre purpose, and fashionige the same as yove shall see here folowinge be the figure marked with the letter E. This peece of canvas yoveshall cause to be dobbed in molten colofonia and when it sukes i noghe of the licor take it up and put aforme into the same or fill itt with drie sande, and when it is drie caste the sande oute and fill it of the receite made for the artificiall canes. But that they muste be mingled with two partes more of rosen, and a haulfe parte of brimstone, whiche muste by smeltinge over a softe fire, and corporate the same and the other composiciones together, and fill the saide canuas with them, beinge well fastened with marlin coarde and the half pike trouge the midel of the same as the draughte followinge sheweth, and in the mouth of this scuibb yove are to putt a quantitie of verie drie mixtures, and some pouder, that withoute delay it may kindell fire, the execution of this instrumente is excellent to bourde shippes, to burne sailes, to inter atrince or anay narrowe place, or to break any order or array, if yove please yove may fasten or sticken into the saied scuibb in degrees lighte pipes or canes of yron or brace of five enches longe, beinge of a pistoll or caliver boare, placinge the touche hole therof towards the oute warde side of the mixtures, beinge well bounde to the pike so that it doth not fall, at leaste till the execution be finished, and let the touche holes be primed with goode pouder; also yove may put a bullet into each one of thies pipes, beinge charged with

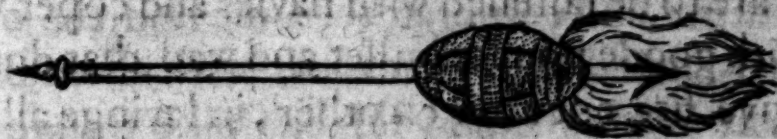
with goode powder, and well handled they will doe greate execution.

E.



To arme haulfe pikes with fire-wourcke, which is rare to burne sayles of shippes or to bourde or inter per force into shippes or assaultes, tranches or any narowe place, they are both goode in many defensive and offensive occasions be sea and lande, they are to be filled with the selfe same receite before taughte, and alsoe coated in the selfe same maner. For executiones at nighte to inter into a trince or forte, per force they are of mooste rare executiones, and doughtless they shall put the enemy into greate terror by reason of the furie, terrible noyce, and force of their flame, in the executiones of patarres and camisadas they are wonderfull goode, beinge recomended to the charge of brave Souldieres of aproved valeor and resolute determinationes, for doughtless they will put the enemy into greate terron, for soudaine executiones in tranches or breaches at nighte they are wonderfull goode. The figure of their draughte youe may see here under set downe, as marked with the letter F.

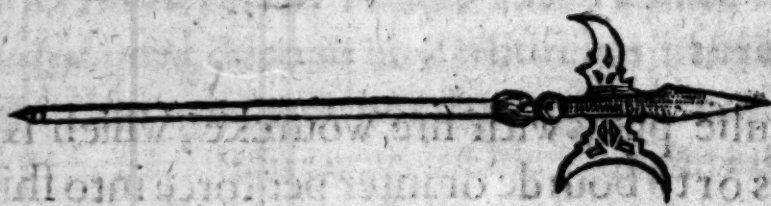
F.



For to offende or defende in diuerses occasions of importance youe may arme a halbarde with a device of fire-wourcke in the selfe same maner as before taughte to arme pikes. And with the selfe same mixtures and coated, with the like coatinge as before taughte for the arminge of pikes, to whiche youe may binde with copper wire thre or foure shorte pipes like caliver barreles, of six or seaven enches longe made of brace, and loaden with powder and bullett, as the draughte by the letter G. sheoweth; which alsoe beinge plased betwexte pikes is goode for severall occasions of service, youe may alsoe arme targetes in the selfe same manner which for verie many executiones in warr are goode, and let none be ingnorante that thies engi-

nes of fire-wourcke, beinge well and curiously handled doe put the enemy in wonderfull terror, and specially in sodaine occasiones, and stratagemes used often times at nighte.

G.



THE SEAVENTH CHAP.



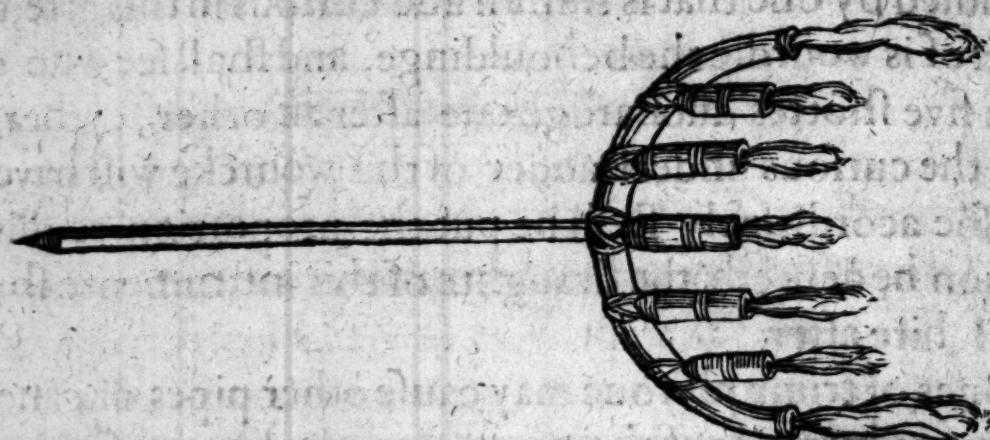
He figure followinge beinge armed and well ordered is of rare execution in narowe or straighte places, eyther to ofende or defende, and are verie necessarie in many ocaſiones be ſea and lande; On the two ſhoulders wherof youe may arme two ſcabbes filled withe the receites before taughte, and in the inner parte of the instrumente, whiche is made of yron for this purpose whiche youe ſee by the figure followinge and goeth cross the pike, youe may put five pipes of yron or brace prepared and made for that purpose, and that each of them be of eighte or nine enches lōge, and ſoe greate in the boare as a piſtoll barrell, whiche are to be faſtened with nayles and coper wire, and to charge them with goode powder bullet and wad, that don youe may cauſe them to give fire one after on other, in layinge all a longhte the touche holes a peece of fine linenge clath filled with fine powder, and wett in gineper oyle, that the fire may take hir courſe by degrees; ſoe that the ſaide pipes ſhall ſhoute one after a nother as youe woulde deſire it to doe, (eyther quicke or ſloe;) Advertiſinge that the linenge wherin youe put the powder to give fire to the touche holes is to be well faſtned or bounde yuſte uppon the touche holes with marlin corde, ſo that the courſe of theyre execution may tacke effecte in juſte the due time ordained, the which in givinge fire to the firſte the reſte will diſcharge one after an other.

Duringe which time the two ſcabbes placed on the two ſhoulders of the instrumente, beinge fired will burne; duringe the time of the execution of thies pipes, and rather more, and will yealde a greate flā-

te flame, the compositiones that goes to this instrumente are the selfe same before taughte for to arme scubbes; soe that this instrumente beinge handled by one that is skilfull and curious in this arte, the execution wherof is wourdie the behouldinge, and shall see who orderly shall those five shottes discharge one after an other, eyther quicke or slowe, as the curious understander of this wourcke will have the same to be, (soe accordingly shall he put the proportion required for the execution he desireth) the draughte of this instrumente sheoweth the letter H. here after.

In ocaiones of triumph youe may cause other pipes or canes greater then thies to be made of the greatnes of the boare of an arcabuse de crocke, and of fiftine inches longe in the barrell, whiche beinge filled in this maner followinge, is wourthie to be admired, fill each of the saide canes as foloweth firste take a caliver shot of poudre, and charge the firste cane therwith, then beate uppon the same a stoppel or wad of fine cotten boyled in poudre brandevin and petrol-oyle, then fill uppon the same to the quantitie of a goode musket shot of the mixtures made for the artificiall canes, and uppon the same a stoppel of cotten as before taughte then a musket shot of poudre, then fill the reste of the cane or barrell to the mouth of the mixtures made for the artificiall canes, and take heede that youe doe not beate them harde uppon the poudre and see that thies mixtures be verie drie, for beinge soe required for this execution, and observe the selfe same order for the fillinge of the reste of the canes and all alonge the mouth of thies putt a peece of lininge full of fine stamped poudre wet in gineper-oyle and brandevin and see that it be verie well fastened juste uppon the mouth of thies canes, that no fire can touche the same, but that whiche is ordained as before taughte: soe in givinge fire to the firste cane or barrell, the reste in order one after another will discharge, and each of thies bareles or canes shall yealde two shotes and a flame, whiche shall indure but very shorte, the mixtures required for this execution is of that which is made for the artificiall canes the draughte of this instrument sheoweth the letter H. Advertinge that thies mixtures are to be very drie and apte to kindell fire, and in theyre putinge to the barrell to beate them very softe for beinge soe required.

H.



THE EIGHTE CHAP.

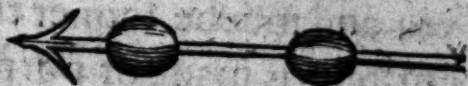
To arme a rowes with artificall Fire-wourckes.



Hies artificall arowes beinge shote oute of greate ordnance are goode to burne houses, or in cāpainā they are alsoe goode to burne the enemyes quarter, the manner who to arme them is to tacke apeece of stronge canuas boyled alitle in colosonia and to fill the same with the compositiones beforethoughte to arme haulfe pikes, and that it be well bounde to the arowes with marlin corde, for the due proportion lenghte and weighte of thies arowes is required the assistance of acuriouse matematisian, or of one of goode judgemente in givinge the necessarie instructiones for the makinge of them, severall mañer of wayes, some to pearche shippes from side to side eyther above or under water, otheres to be shote afar of to burne houses or quarteres, greate curiositie and perfecte judgemente is required for the severall maner of wayes which thies arowes are to be handled and made acordinge to there severall executiones, some are made to burne the amunition of powder in shippes if they chance hitt the same and whiche will pearche any shippe from side to side and are of farr greater execution then youre bulletes the draughe wherof the letter I. sheoweth.

I.

I.



THE NINTHE CHAP.

To arme artificiall instrumentes ordained in pottes made of metall filled with composiſiones and mixtures of fire-wourcke, to burne of aſodaine ſhippes gates bridges palifados or any other combuſtable thinge apte to kindel fire.

TAke foure partes of roſen, one parte of armoniak foure partes of ſalpiter thre times refined, a haulfe parte of bay ſaulte, all whiche cauſe to be beaten into pouder, then take one parte of linſatt-oyle, of the fatt of a hogge one parte, then cauſe all thies composiſiones to be mingled together and putt them in a pott made for that purpoſe over a ſofter fire, and let them boyle till they corporate well, and then take them up, and put into them one parte of camfire, and thre partes of muſket pouder and mingell them well together, and put them over a ſofter fire till they corporate well, then take them up and put to them ſmale pices of gun-pouder match made of fine cotten and boyled in fine beaten pouder, ſtronge brandevin and giniper oyle or petroll-oyle, then take foure partes of colofonia and cauſe it to be beaten into pouder, and let it be mingled with the reſte mixtures. Then cauſe the instrumente or pott made for this purpoſe to be filled till youe come to the thirde parte of the pott or instrumente, that don take of the other mixtures withoute colofonia, and fill the reſte of the instrumente with them, and on the upermoſte parte of all putt of the drieſte mixtures, and let them be ſo drie that they be apte to kindell fire, and in the verie mouth of the instrumente cauſe to be putt a quarter of an enche of pouder and of the beſte, and ſticken to the ſame apeece of gunpouder matche ſome foure inches deepe into the instrumente and cauſe itt to be well covered with apeece of canuas till time of execution, ſoe that water nor fire can touche the mixtures

nor the powder. And when occasion shall offer to give it fire, do but touche the gunpowder match with youre ordinary matche, and it will presently kindell fire, yea and muche sooner then powder, to which effecte this gunpowder matche is made of purpose.

Thies instrumentes in times of execution they have theyre stronge chaines of yron that they may by bounde and fastned, to the place of theyre execution, soe that they do not fall, nor that the enemy may use any endustrie to cut or put them of; so that the executiō may take effecte. It were verie goode, for the securitie of theyr execution to arme two or three artificiall canes on both sides of them, whiche are to be recommended to persones of brave spirites, and of aproved valeor and determination.

Thies compositiones when they bigin with theyre execution theyre operation and execution is moeste rare; Advertisinge that they muste be putt in to yron or brassee pottes made for that purpose, as the figure folowinge sheoweth, and also withe theyre stronge yron chaines, for in putinge thies compositiones into veseles of woode questionles the force of this fire will burne them at an instante, which for curiositie, and alsoe to knowe the operation of this fire, yeaused triales to by made, and founde that thies instrumentes made of woode did presentlie burne, and consume into aieshes, and was sooner consumed then the matter that was putt into the same, be reason of the wonderfull force of the fire of the saied compositiones, which rare and wonderfull breef execution is wourthie the admiringe, the orderinge and figure of the saiede instrumentes youe see hire under where the letteres K. L. M. sheoweth.

K.



L.



M.



The

The receites wherwith fire-wourck instrumentes are armed in findinge theyre operation floe, youe are to augmente them with drie mixtures apte to kindel fire, as powder, saltpeeter, brimstone, armoniake, and migell the well together, and let them be corporated with the floe mixtures in their due proportion; Also the mixtures youe finde quicke and apte to burne, and do not indure, acordinge as theyre execution requireth youe are to augmente the with a litle floe mixtures, as linsat-oyle, turpentine, colofonia, rosen, and wax, but greate consideration, and curiositie is required in put them in their due proportion.

An artificiall baule of fire wourcke beinge dischargd oute of a peece of ordenance in a cleere day can not by discerned nor seene till it declines to the earthe, But beinge shot oute of a peece of ordenance at any marcke in a darcke night, may by perceived, and specially when it begines to decline oute of his righte course or line, and the more darcke the night is; when it is dischargd oute of a peece of ordenance the better youe may discern it; but in the begininge of the range or line youe can not see it so perfecte as when it begines to decline to the earthe, which i have tried at the leager of Breda, the night a pointed for the triumphe don for the regaininge of that place.

If for curiositie youe woulde have a ball made with wilde fire to burne within the water, let the coate therof firste burne a litle before youe caste it into the water, soe that it gives fire to the compositiones there in ordained for his execution, whiche beinge fired, (to wit) that parte or partes where in the vente is, beinge filled with ayre doth cause the other partes of the same to shume and burne a bove the water, with a wonderfull noyce admirable to the behoulderes.

The balles made for this purpose are lighte, and if youe put them into a peece of ordenance, beinge loaden with the ordinary powder required for the executiō of the same, in their roaring and wrastling of this ball it will burste unto peeces; Soe that for to shoute bulletes or balles oute of greate ordenance armed with fire wourcke the cross barres nowe of late invented is the beste, the maner of arminge and coatinge thies bulletes and cross barres, i have set downe before, who and with whate compositiones, whiche are of rare executions by sea and lande, beinge well ordered by one of perfecte judgemente in this arte.

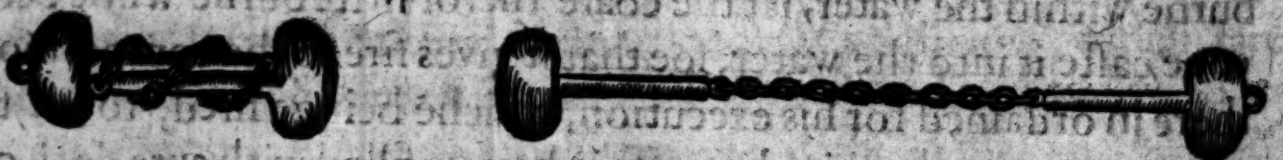
I have alsoe put downe neowe invented cross barres to be shot ou-

te of greate ordenance, whiche beinge armed as before taughte, are excelente to burne townes, and the enemyes quarteres, and iam well asured that no comprabell device, for that purpose was as yet invented, neyther to by shoot in the fronte of a battell, i meane those cross barres invented with chaines for beinge dischargd oute of a peece of ordenance in a reasonable neere distance in the fronte of a battell, or any order or array, y doubt not that it is the beste invention, that hase beene divised as yet for that purpose, the enemy beinge a reasonable distance of; But the enemy beinge very neere at hande the cartadges and bagges filled withe musket bulletes, nayles peeces of brocken yron, peeces of chaines, which beinge shoote oute of greate ordenance are of wonderfull executiones, beinge handeled by prudente and curiouse gunneres of perfecte judgements, and longe practice in this arte.

The draught marked with the letter N. sheoweth howe the saied cross barr shall be put into the peece; and the letter O. sheoweth howe the same flieth violently trough the ayre, and howe it spreadeth a sonder when it is shott oute of the peece, givinge a terrible noyce in his motion and range.

N.

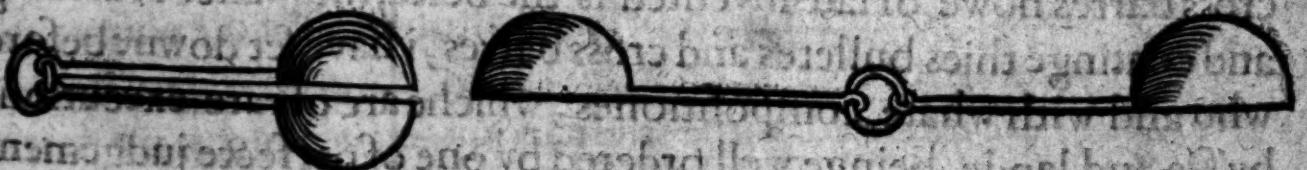
O.



The draught marked with the letter P. sheoweth howe this other cross barr is to be put into the peece, and when it is dischargd the letter Q. sheoweth howe it spreadeth a sonder, and flieth withe grea- te violence in his line and range.

P.

Q.



THE TEN THE CHAP.

*Treatinge of the confines of a Kingedome, as alsoe of the goodde
lawes to by observed in the same, and of many necessary instru-
mentes thereunto apertaininge, and who the same is to by forti-
fied and stronge by arte, or by nature, or by bothe.*

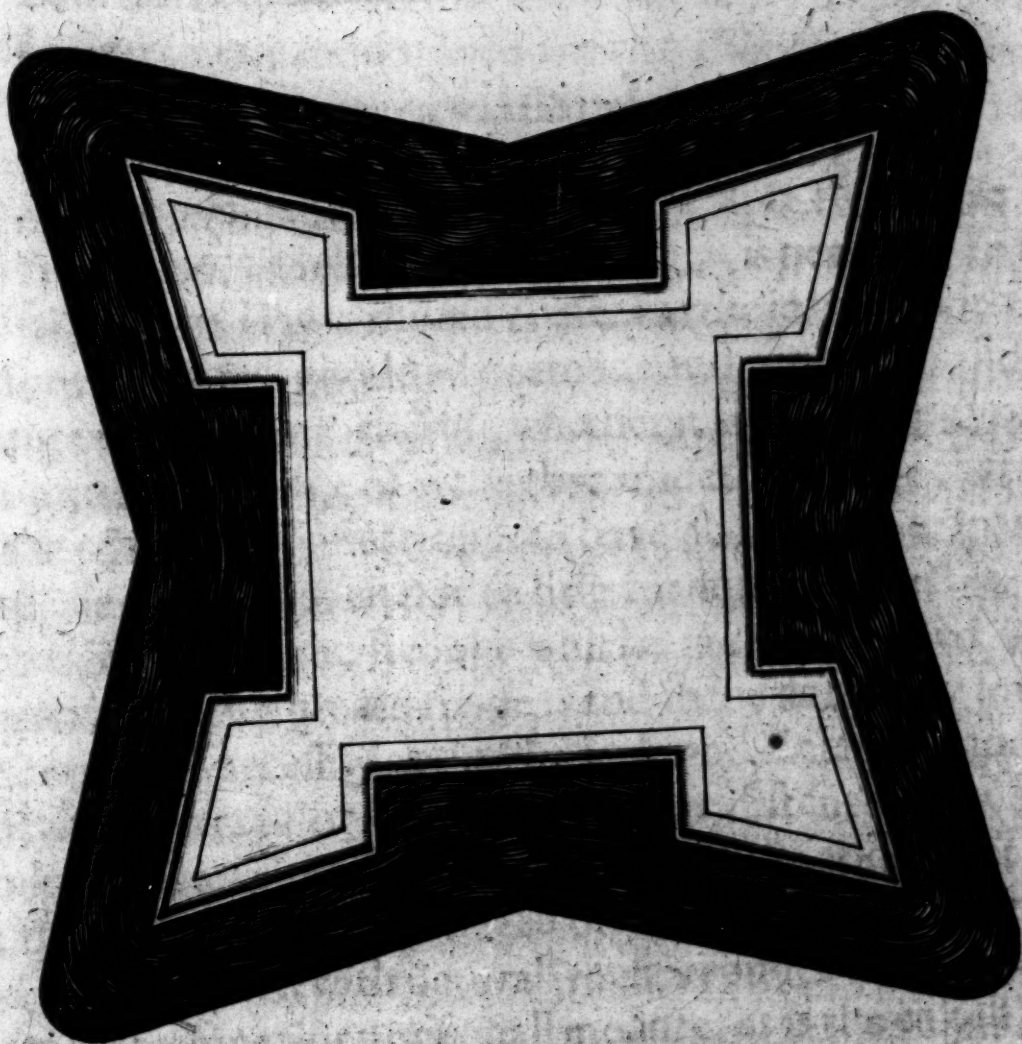


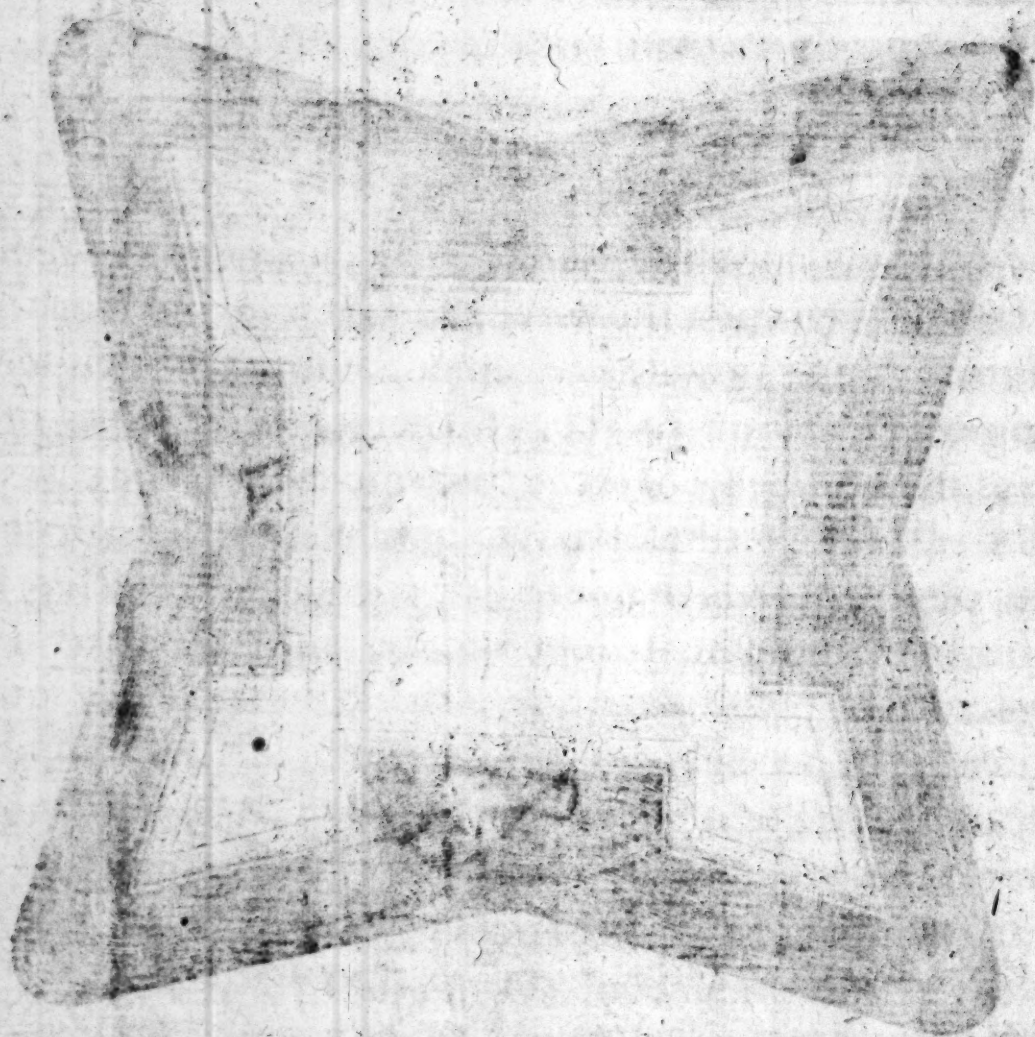
Such as are desirous to be couriose and experte in war-
like afaires it importeth that they be of goode judge-
mente in fortificationes, as well to offende as to defen-
de; Notwithstandinge that for this purpose in all kin-
gdomes and states are elected ingineres a luinge them
a goode pinshon: Yet suche as are of longe practice in wars, and do
aplie them selves well in hope to by advanced, by theire a proved
goode partes and suficiencie oughte to exercise them selves in fortifi-
cationes, bienge very necessarie in owne who professed to be experte
in this arte of warr, and knowe howe to intrinch and fortifie him selfe
in many ocurrantes in oppen filde, howe to cutt a rinto to win atow-
ne or any stronge place: As also to knowe howe to drawe the plott
of townes fortes and castelles, and also in knowinge all necessaries for
the defence therof, and to know howe to prevente the stratagemes
to be feared of his enemy.

Douptless thies thinges are of greate consideration, for the
strenghte of akingdome consisteth muchin beinge well fortified, to-
gether with the quantitie and qualitie of his subiectes, and in the goo-
de qualitie of his dominion and country: Those princes and Ree-
publikes are judged mighty and stronge, whiche in their kingdomes
and states do montaine goode religion, goode lawes and goode ar-
mes, and do exercise the same, and do inioy holsom ayre, fertill
grounde and naturall strenghte, with suche other conveniente co-
modities therunto required; To by vnderstoode that all countries
are ströge by nature or by arte or by both; By nature they are stron-
ge when they are inuiored withe the sea rounde aboute, or on parte
therof, or backed with marrasses or riueres, and those to be stronge
by arte, and in their frontieres nexte adjoyninge and places moite
conueniente to haue townes castelles and fortresses fortified by arte:

All confines are eyther maritime or mediterraneall or both the one and the other, whether they are montanouse places or in plaine campaina, or do patticipate of the one and the other, if they by mediterraneall it muste by viewed and considered on whate parte the enemy might come to offende the same, and where he mighte moſte comodiouse come to atempte, And it is alsoe to be considered on whate partes he mighte make his inroades, and retire a gaine with safetie, and whether their by any situation whiche beinge fortified by the enemy mighte moleste or a noy the country nexte adioyninge: If the confines of the kingdom by maritime or on the sea coaste, all the coaste and circuide of the same are to by viewed and remarcked, that prevention mighte be taken in due time, in as muche as may possible to hinder the enemyes imbarcation, in the places moſte fitt for the same; Yea and in all places whiche mighte by suspected (if it be possible) for the better securitie of the kingdom or state, but in some kingdomes the circuide and places on the sea coaste are so greate that hardly all can be fortified, and so the enemy ariuinge with a mightie army, and mighte be in a place litle suspected, may put the kingdom and country in greate perill and danger, as was seene by the spanishe navie at the conquiste of portugall, when they landed neere cascales in a place never thoughte vppon by the portugeses, so that they founde them selves deceived, thinckinge that the disembarcation shoulde have beene betwexte the citti of Lisboa and Sangilians castell, where they stoude fortified in their tranches, with determination to hinder the disembarcation of the spanish navie, but he landed in a place far better for his purpose, and of muche lesse danger, whiche was on the other side of cascales towards the northe litle thoughte of by the portuges, so that it is thoughte that sea coastes are with greate cosse and difficulties defended, thoughe there be many places stronge by nature or by arte; And for as muche as there be diveres and variable qualities of confines, and hardlie any rules to be given for their proportions, nor whate distance from frontier to frontier, it muste be presumed that the confines of a kingdom doth houlde some corespondance with the circuide of a citti, in fortifieng whereof the bulwarkes are of the moſte importante memberes, the which moſte comonlie are put in the places where they can moſte offende the enemy, and defende them selves, and the place, regardinge due distance in suche sorte, that the one may defende the other in as muche as may by with their artillery and smale shott. And in like maner the curtines and
flan-

N. I.





flankes betwexte bulwarck and bulwarck, with other considerationes therunto apertaininge, and even so the fortes to be made in the frontieres are to houlde the like proportion and correspondance with the confines of the contry as do the bulwarke with the curtines of acitti or stronge place, the one to be placed so neere and in due distance vnto the other, that they may assiste and socour one another. and in suche partes that they may damne the enemy, and defende them selves in as much as can be possible.

Num. I.

THe places bienge viewed and found apte to receive offence by the enemy, and also to offende him, it is necessary to fortifie the same as well vpon the sea coastes as the inlande with stronge fortificationes, takinge goode advicement and carefull consideration in choisinge the situation therof, whether it be on plaines or hilles or marittim, or consistinge of al the thre, understandinge that the circuide of the place or fortification is to have aconueniente space rounde aboute (neyther to much nor to litle for many respectes.) The situationes in plaines, are stronge whiche are inuironed with deepe lakes greate moores greate riveres, and suche as may by sonke vnder water in time of necessity, as in Holande and Zelande, and suche as have a mpainaraza or plaine, sufficient distante from all thinges that mighte over comaunde the same. The situation that is vpon a hill, that is stronge that standeth on the moste higheste parte thereof, and all vnderlaied with naturall rockes rounde aboute, not havinge neere it any superior nor equall moante, as is the castell of lisburne. For all situationes which have a difficulte access are stronge when they can not be offended from other adioyninge moantes and the muche more stronger when it is not minable. All stronge places moste comonlie are won eyther be force of armes, batterry, treason, surprize, or by longe besedginge, or by assaulte, scalinge, or undermininge: The maritime situationes are stronge when they are compased by the sea, or parte therof, and the reste divided from the maine by greate and deepe ditches as is the castell of san Iean in Portugall, who hath on the shore side a deepe ditch digged vpon a rocke, and the maine sea on the other side, or builte vpon the topp of some rocke with the saied comodities, as is the penon of veles or the castell of cales in Portugall. Citties and townes are made stronge by nature
and

and industrie of those by nature we have all ready spoken in the strenght of situationes : Citties by industrie are stronge by the forme and by the matter , stronge by the matter when they haue thicke walles , greate terraplenos, broade and deepe ditches. By the forme they are stronge when it is framed in suche sorte that the moste fardeste and all quarteres may haue corespondance to offende the enemy with the cannon and fyry shott. Of this sorte are those which do moste neere a proach, vnto the sircular figure but with good regarde of the due lardgnes and proportion of the curtines , and equall distance from bulwarke to bulwarke.

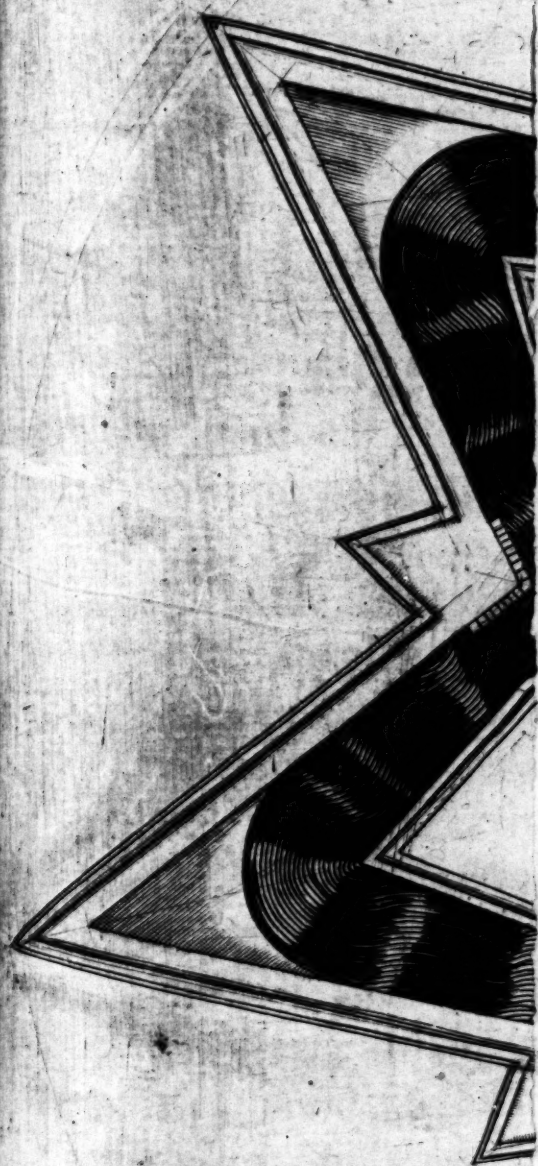
Theire intereth amongste thies all townes and stronge fortes consistinge of five, six seaven, eighte, nine, or ten ravelinges, and curtines, by directe line, and who many more angeles , so muche the better the foure anguled of all is the weakeste. It is to be vnderstoode that smale places of them selves are weake because they can not so sufuciently resiste any excessive battery, and other offensees as greate places may which haue roome capable inough to raise defences and necessary rampares and horne wourkes , a gainste any greate force , neyther oughte they to be so lardge that the circuide therof woulde require a whole army to defende itt.

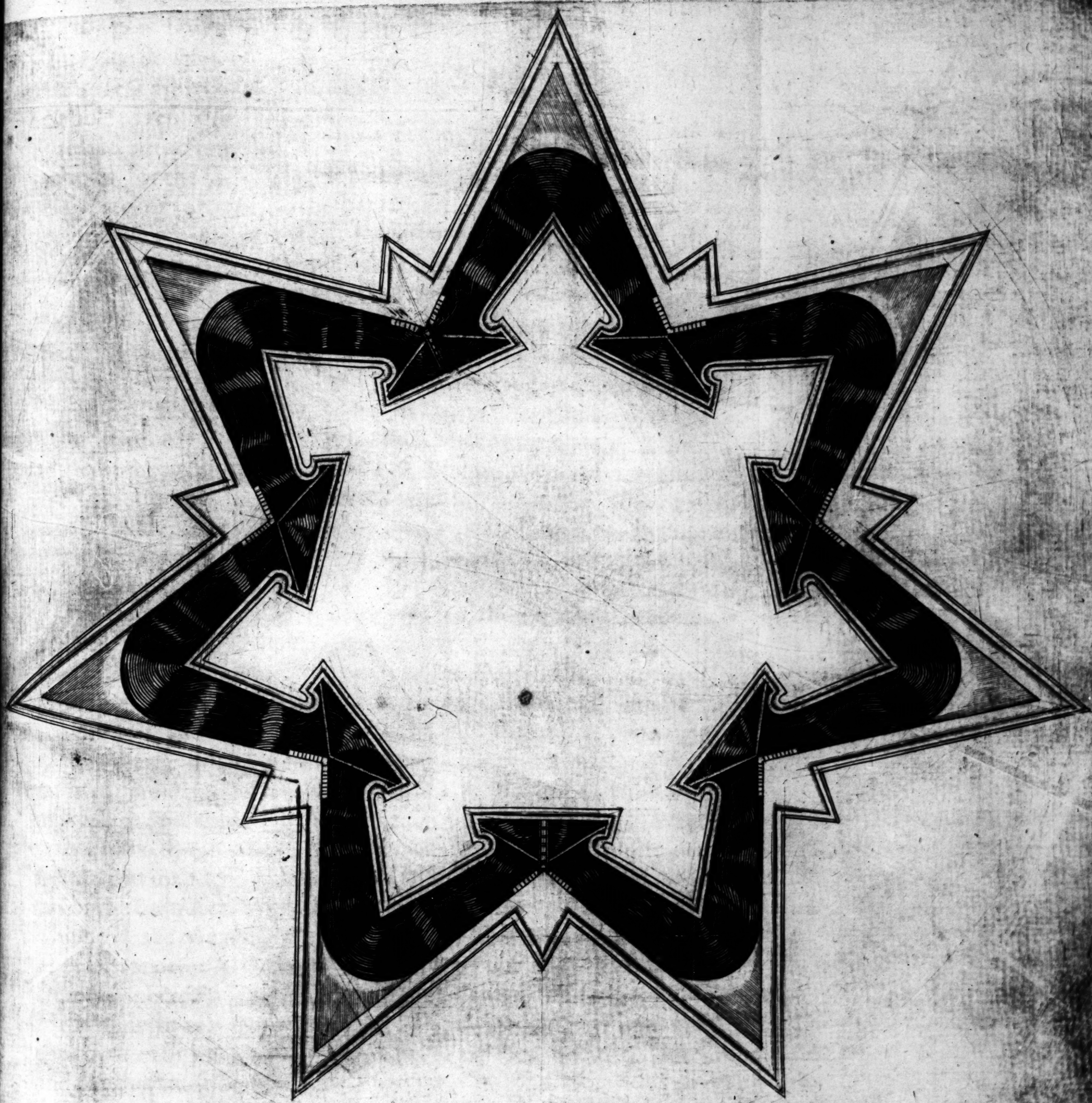
Num. II.

THe fortificationes of citties and castelles is principally grounded a gainste the offence of greate ordenance , and alsoe defended with the same and with other fyrie weapon : It is to be considered that the artillery is devided and differenced into greatnes or Zices Royall, and into lesher zices.

Of the zice Royall is that peece that shooteth of seavintine pound upwarde , as is the culverrin the quarter cannon : the demy cannon, the cannon and double cannon, the pedrero basalisco and such like. And for the lesher zice the difference is to be vnderstoode that all peeces that shoote bullet from leavintine pounce weighte downewardec as is the demiculverin, the saker , the minnon , the falcon and falconett even to the rabinet and arcabuse de crocke.

The artillery from whence a citty, forte or stronge place may receive moste offence and domadge, is that of the greatest zice , for of the lesher zice there is no greate doughte to be had, sith that the demiculverin can do no greate offence nor domadge , and alsoe from
that





that zice downewardes, and therefore, the bulwarkes terraplenos and parapetes are to be made in suche sorte and strenghte as they may be able to resiste and beare the blowe and gulpe of the artillery, of the greateste zice; mattokes shoules or spades are verie necessary instrumentes, for the same. Relation beinge taken of the forme of the citie, forte, or fortress, by it eyther of 5. 6. 7. or 8. angles, or ravelin-ges, or of how many soever it is necessary to couple the same, with the theyre convenient membres, to make it proportionall in strenghte.

The bulwarkes are uppon the angles or corneres of the forme of the citie or forte, and of such distance and due proportion, as shall seeme to the skilfull Inginer, and they oughte to by made optotise or blunte, and not sharpe, for so they are more stronge and capable.

The partes of the bulwarke are the travesses or flankes orechion, pum, garde, or shoulder, the fronte or curtine, the conter-fronte or spurtes, the pestilles or parapettos, the place or roome for the artillery. The bulwarkes as i saied are placed within the angles where place is to be made redy for the artillery, and to mounte the same in suche a heichte, that it may discover the campe or circuid on every where in at much as is posible.

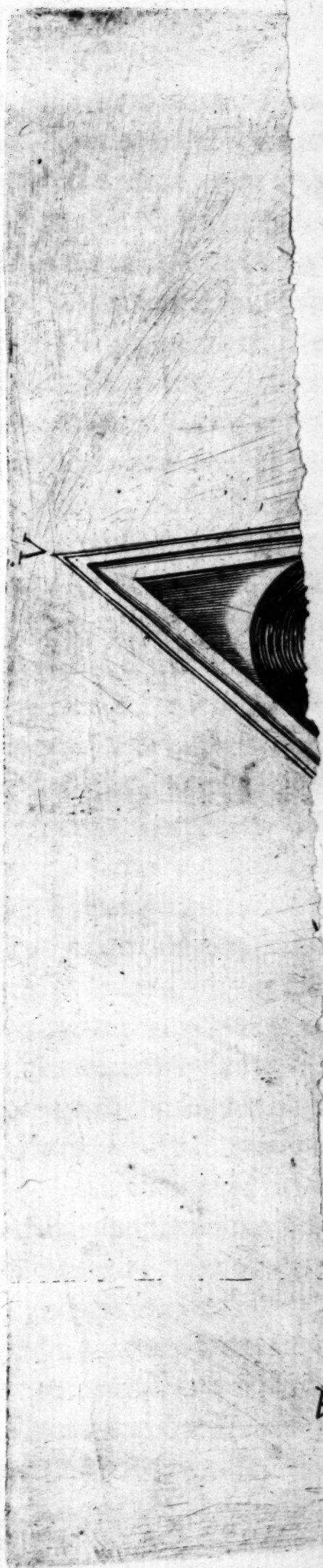
It is to by considered that the curtines of the bulwarke shall stande in suche sorte that they may be touched or beaten from the firste corner from whose flanke or traves it taketh his defence, and the line or pointe is to be taken som whate more from the flanker, and in suche distance agreable to the greatnes of the bulwarke, soe acordinge to the greatnes of the same, the measures are to by increased or diminished, observinge the due proportion required, It is necessary to make in the bulwarkes certaine issues, the whiche are made in the parte that looketh towardes the flanker or travess, thies are moste necessarie to put men oute for the ditch. The conterfortes and appartenances of the bulwarck, have alsoe their measures and proportiones, the whiche i leave to avoide prolixitie, and because that they may by more or lesse acordinge the discrefion and plates of the curiouse and perfecte Inginer. The Cavallero within side adjoyninge to the curtine in the mideste of them are builded, and from suche Cavalleros are the curtines or walles of the bulwarke defended, and alsoe the fiede, and for this cause are the bulwarkes wonte to by made, and to raise them so high, that they may discover well the places of theyre executions.

Num. III.

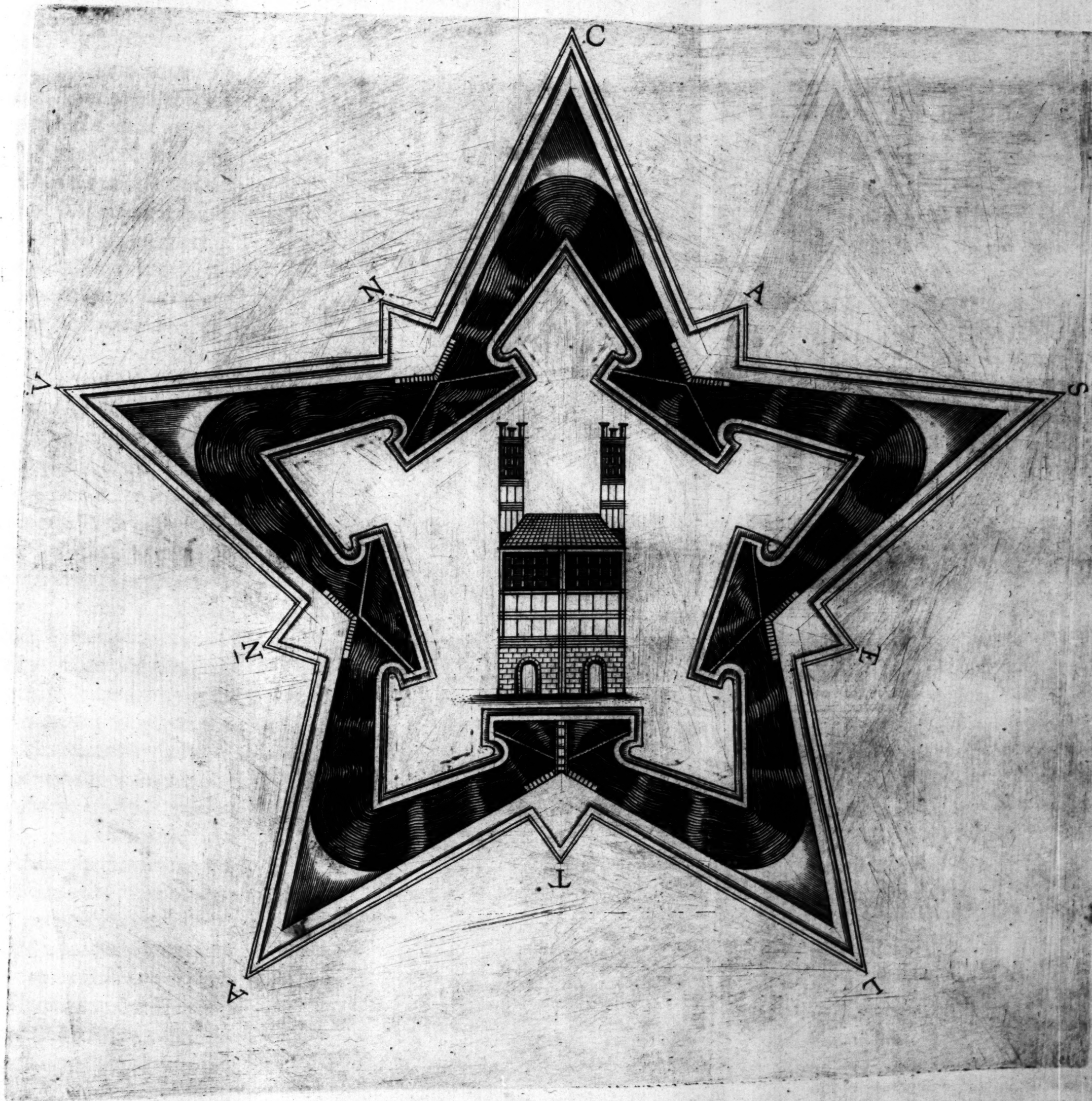
THe gates or portes of a towne cittie or forte, are to by placed in partes, moſte comodious for the ſervice of the ſame, both in peace and war, conveniente to receive in, or to put oute people moſte ſafe and ſure from all offences (in as much as can by) the gate muſte have his drawen bridge made of ſtronger timber and yrones neceſſary for the ſame, it is to be reaſonable broad for the comoditie of the wagones and artillery, and very ſtrong, if theyre by no more then one drawen bridge or gate let them not be directe. Neceſſary it where that no high wales nor hedges of gardines, nor ochar-des nor ſuch like by permitted on the outwarde partes of the gates or walles of any cittie or place of importance; and a diſtance of 600. paſes, but all razed and made plaine on all the circuide rounde aboute, which do often times ſerve for aſhelter to the enemy to aproache of a ſuddaine neere the walles, that they can not by diſcerned, till they com into the ditch, by reaſon that trees and hedges do ſhelter them, by which meanes many places of importance are ſoone loſte.

The terra plena is the onely remedy againſte the furie and execution of the artillery, and is to by made with in, and behinde the wall cloſe to the ſame; and the cavallers and bulwarkes oughte to by made in ſuche forte, that the wall bienge fallen, the ſame mighte remaine and ſtande like a mightie mounte againſte the enemy, and ſhoulde by made of ſuche faſte and maſſie earthe (that it cromble ſlipp nor roule not, and ſo fall downe) as do many fortificationes made of runinge ſande; the heighte and bread therof oughte to by ſuche as the comoditie and ſeate will require: All thies thinges are the memberes of a fortification, the which how muche more fitt and proportionally they by placed aboute the boddy of a citi or place of importance, ſo much doeth it make the ſame more ſtrong and beautifull.

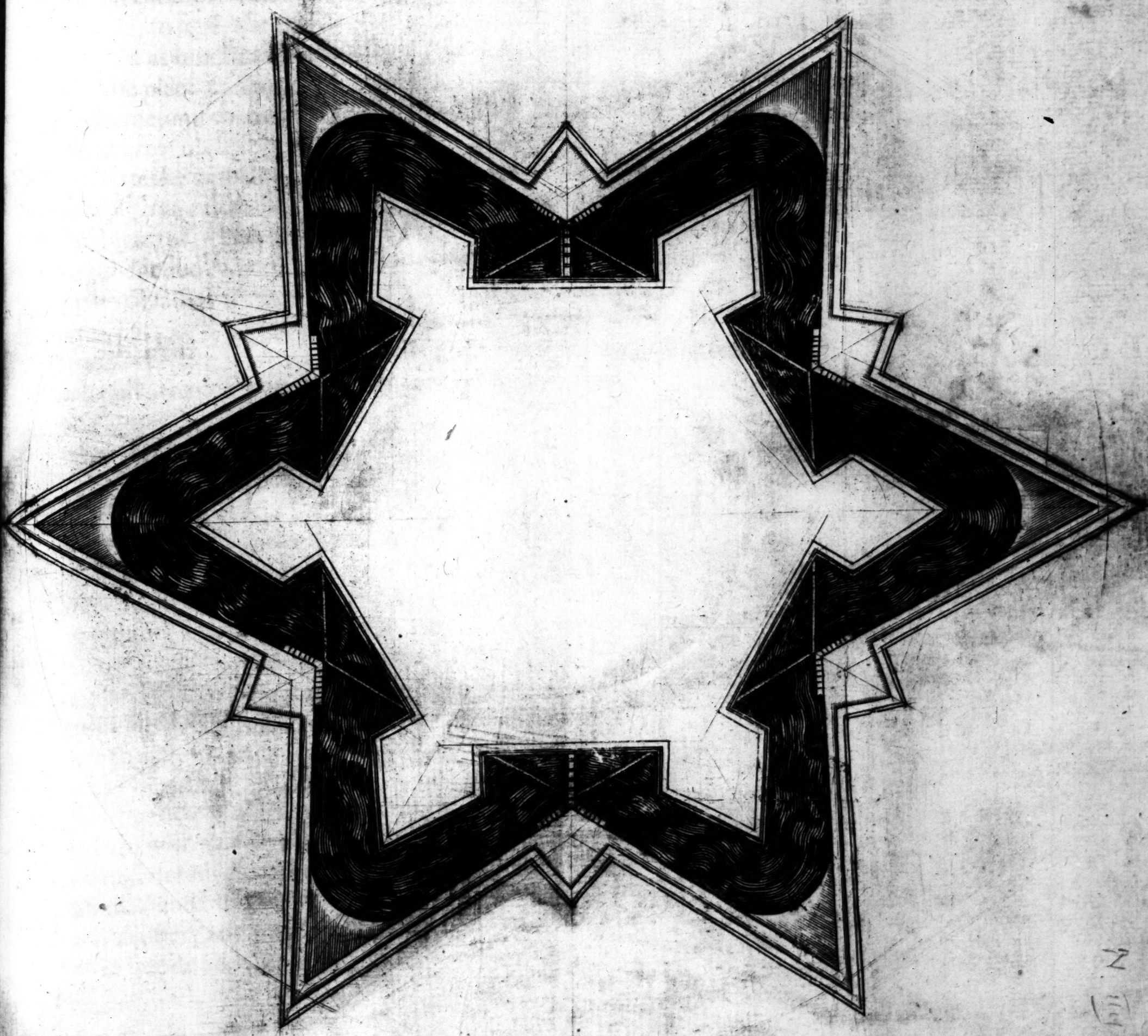
It is alſoe to by noted, that if a ny of thies ſituationes there by neere adioyninge any woodes, vine yardes, orchardes, tries, houſes, charches, monesteries or other edificies, conſideringe if they be ſuche as mighte annoy the enemy or render him any comoditie, whereby he may eaſilie hinder the citi caſtell or forte, prevention oughte to by taken in due time; If the ceate of the citi forthe or fortress by marittime or ſea coaſte, there muſte by conſidered the qualitie of that ſea, and of the haven, and of whate depthe it is, whether if it
hath



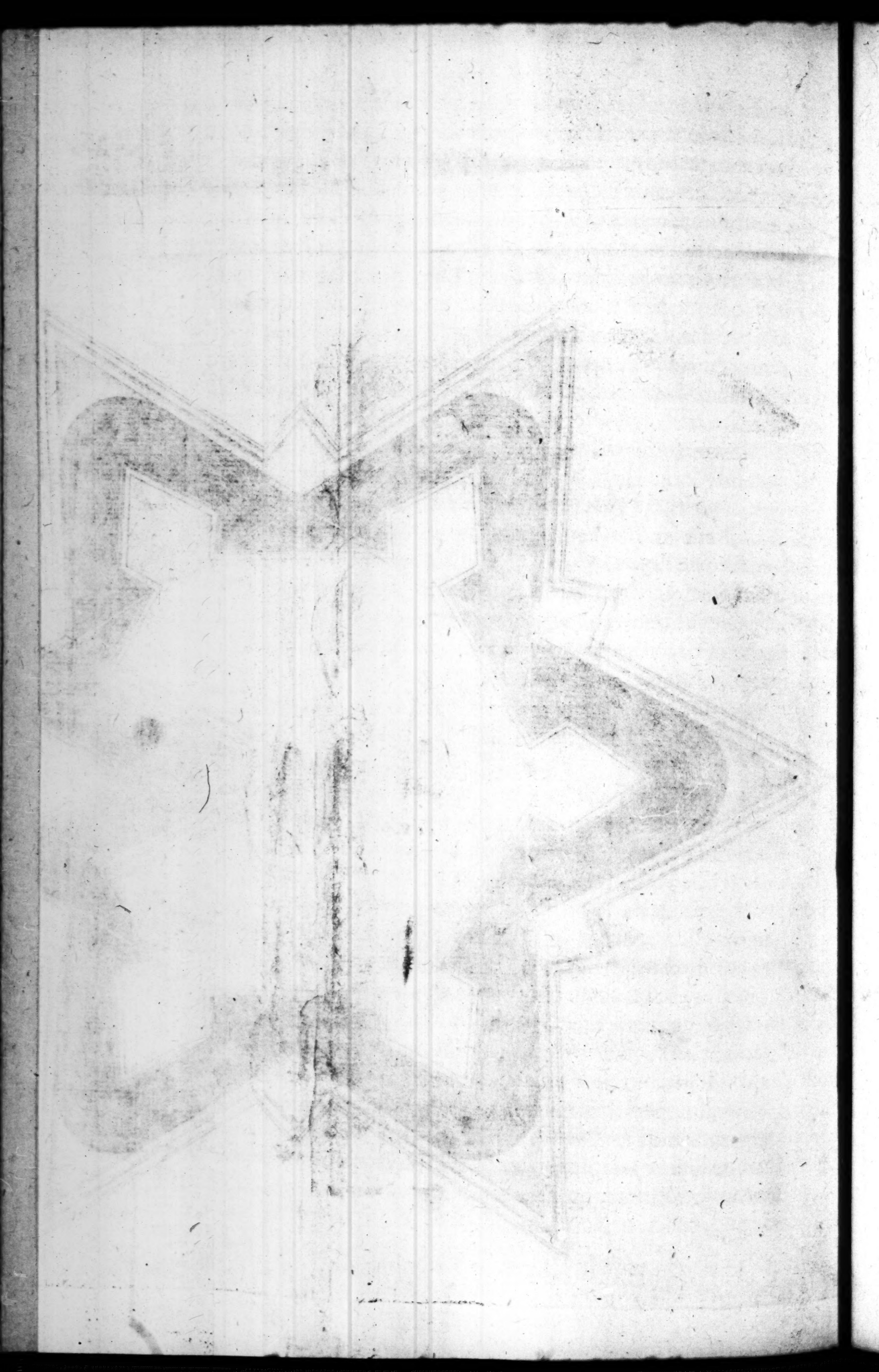
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Handwritten text in the bottom right corner, possibly a signature or reference number, including the characters "2" and "121".



hathe any litle Isle or rocke neere vnto itt the which; the enemy in-
ioyenge may offende and anoye youe, and whether it hath any shore
bay receptable, or place of refuge, or any river mouthe where the
enemy fleete reedinge easilie at an ancor, mighte hinder and emplea-
che theire socoure by sea, and continually moleste them, and whether
it be suche that the enemy mighte advantadge him selfe therewith.
And all the aforesaide conciderationes touchinge the situation of sea
or lande, to forecaste the same in due time with greate care and pru-
dence, in as muche as may posible. The same regarde is to be had wi-
thin the place, and to renoledge every parte therof, bigininge with
the forme, and then the heichte and thicknes of the wall, and the qua-
litie therof. Moreover it is to be viewed in whate parte or partes it is
moste weake and feoble, whate flankes it hath, whate terraplena,
how high and howe thike, whate space betwexte the same and the
inhabitanes, whate gates, how framed and seated, whate ditch, ho-
we broade, and howe deepe, whether it be drie or with water, whate
intries or sallies without the place citti or towne, and whether the ha-
bitationes of the place be on high aboue the alture of the walles or
equall with them, or whether the walles do surmonte them, and fi-
nally all other considerationes wourthie to be noted.

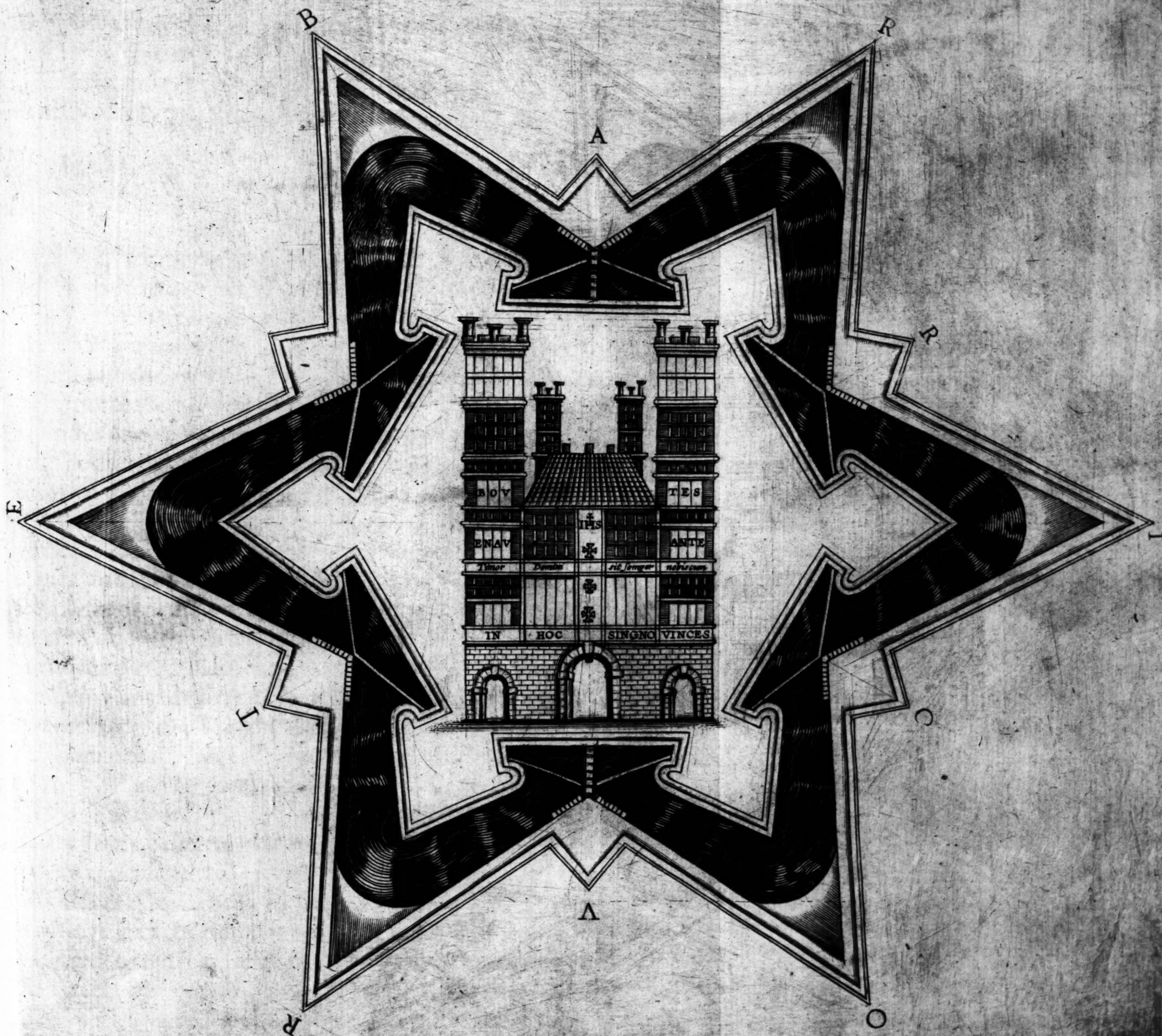
Num. I V.

THies conciderationes duly had, and resolution taken, then
Aploott muste be drawn with conveniente rules and measu-
res to reduce the citti forte or place to the beste forme that
may be, with as litle ruine or defeatinge of houses or churches as can
be, plasinge the bulwarkes, and cavalleres and other edifices conve-
niente to theire seates and purpose in the place moste fitt for the sa-
me, and that to be don withe as litle loss to the inhabitantes as may
be possible. Resolution taken uppon the designe forme and greate-
nes that the place or fortress is to haue, he is to fortifie the feobleste
parte or partes therof firste, and the apteste to be offended. The
fortification well fortified and finished, it is necessary that it be fur-
nished with a conveniente garison of souldiores for the better securi-
tie and defence therof, for otherwise it were like a boddy withoute
a soule (and beside this) if it haue not provision of all sortes of virtual-
les, artillery and munitiones, and of all armes defencive and offenci-
ve in goode and sufficiēte store, and of shoules spades mattocks pick-

axes, sawes, hameres, yron, sledges, barres of yron, nayles, ropes, &c. And many other necessarie instrumentes to worke in earth, or in walles or in stones or in tember, and alsoe in water, mandes, baskets, hand barrowes and wheele barrowes, planks, beames, stakes, watlinges gabiones, and other thinges at batteries and beseedginge, withoute the which it is impossible to repaire and intrinche a gainste batteries asaultes and other ofences of the enemy, all which belongs to the office care and dutie of the generall of the artillery: to see them provided in every towne or place of any importance within the realme, as also all other places which standes for the defence and safetie of the same.

Thies fortificationes wee treat of are very costely, and hardlie to be performed but by a mighty Prince, and specially suche as are made with brike stone goode earth and thurff, as is the castell and citti of Anwourpe, Gante, and san Gilian in Portugall, and the castell of Millan, and fundrie otheres the like, are hardlie broughte to perfection but with expence of millones, so nowe adayes all places are fortified with earth and thurff onely, as is for the moste parte the greate towne of Gante, Mastrick, Dam, Ostende, Hulste and many more places in the lowe countries, as Sluse, Weasell and the towne of Breda, which haue indured such gallante batteries, sufficiente to weare oute a greate and mightie prince, both in his power and purse, whiche was to be seene in the famous sledge and regaininge of *Breda*, where all Kinges and Princes in Cristendom for the moste parte on both sides, shewed their forces and mighte, not withstandinge it was won by the invincible power of that mightie Monarke the *Catholick Kinge of Spaine*, troughe his greate mighte and power, accompanied with the prudente brave conduction and militarie industrie of his renowned Generall *Marques Spinola*, and many brave Captaines and souldiores, together with the incomparable power loue and vnitie of his faithfull and renowned lubiectes of the vnited provinces of the lowe countries, to their greate glorie and honoure, and soe spreade abroad and related by many auctores to their and predecessores greate fame and renoome of perpetuall memory to all posteritie, wherof to relate it were tediousse, and incredible to such as haue not seene the same, with so many thousandes of wagones full of all sortes of vitualles and amunitions cominge every day, where mighte by perceived the loue and greate encomparable mighte of his vnited subiectes of the vnited provinces. At which i haue seene and this
towne

E



towne of Breda iniured with adoble trince rounde aboute som fiue leages with verie many fortes and redutes, all which was finished in verie fewe dayes with earth and fagotes. In fine suche fortifications may serve to goode purposes and indure sufficientlie, beinge well and ingeniously made and of goode earth, and carefully remended in due time, and when anny piece of the same should fall or decay, presently to be repaired and made upp.

Num. V.

ALl stronge places of importance are to be well fortified within as also on the outwarde partes, and greate consideration oughte to be taken that the enemy may not a proach to the walles or gates, withoute beinge discovered before they may come to execute their intente, for which in all stronge houldes and places of importance, moſte comonlye, are placed on the outwarde partes roundes and cēteries, and places for their defence and retreat, with such consideration and prevition, that the enemy do not a rive unknowne to the desired place of their execution as related by their spies, withoute firste beinge spied oute in due time be the outwarde cinteries and roundes, so that all the reste may have time to by all in armes, and each company to repaire in time with speede, with the firste advice or alarme to their colours, and there in all readines to repaire where they shall be commaunded by the Comaunder or Governor of the place. Advertisinge that for many considerations no company oughte to repaire or budge withoute order of the Governor or Sardgente-Mayor, for feare of inconveniences and secret correspondance. To see thies and many more occurrantes in warr prevented, it is moſte necessary that the Governor and Sardgente-Mayor do lodge as neere possible to the place of armes or meaine garde, so that vrgent occasions may be prevented in due time, and with all speede as occasion shall require, the cinterie perdue and outwarde roundes oughte to be chosen of vigilante and braue souldiores, advertisinge that the roundes oughte still to goe forwarde, and very silent, and to make no alce nor staies as some careless roundes do, and that for the greater truste and care refered to their charge, to see thies well ordered and fulfilled, the Governor and Sardgente-Mayor by turnes shoulde goe the rounde, and findinge the roundes

and cinteries not a complishinge their obligationes to see them severely punished.

Such fortificationes as are planted on hilles or high rokes, greate consideration oughte to by taken for their due defence, though the a sendinge of such places by difficulte, yet it were goode they shoulde by compassed with double palisados for their better securitie, and with a parapet made of thurff or brick at the foote of each of them, and way for the rounde betwexte them and the wall.

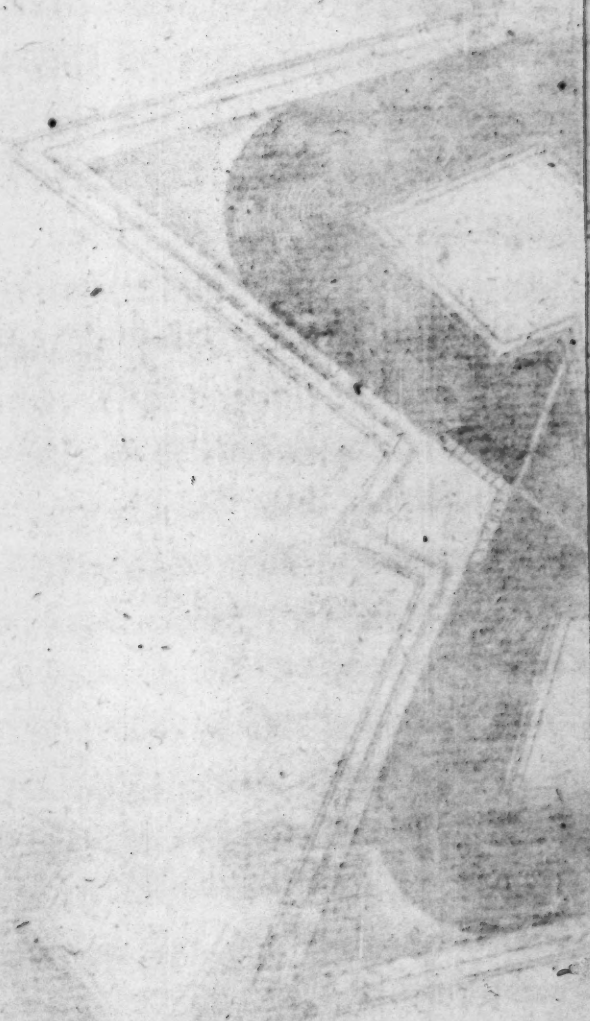
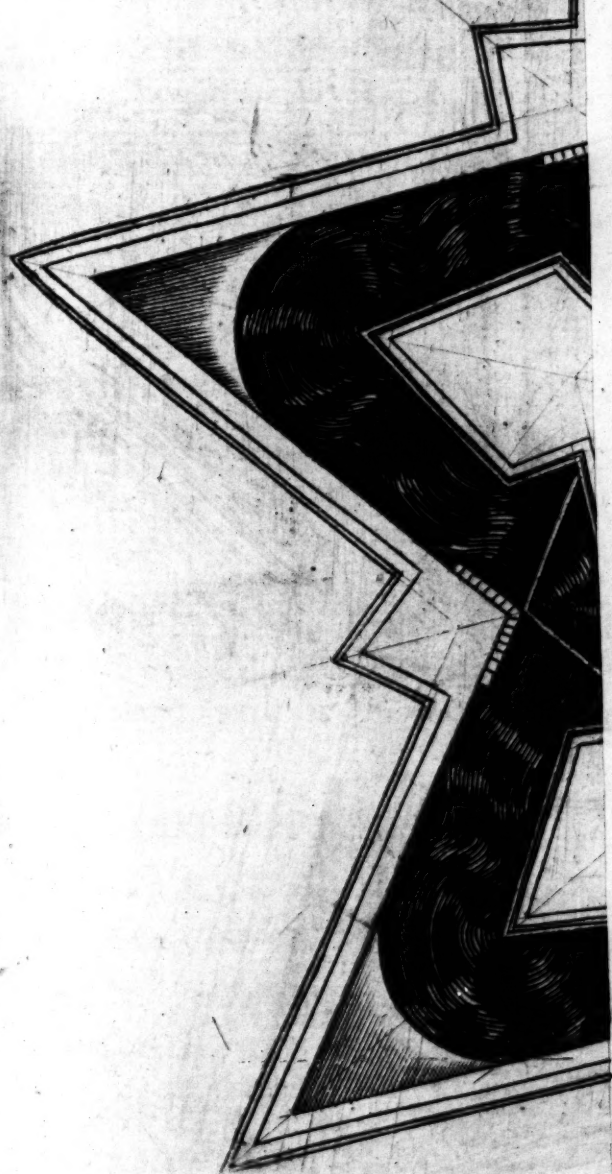
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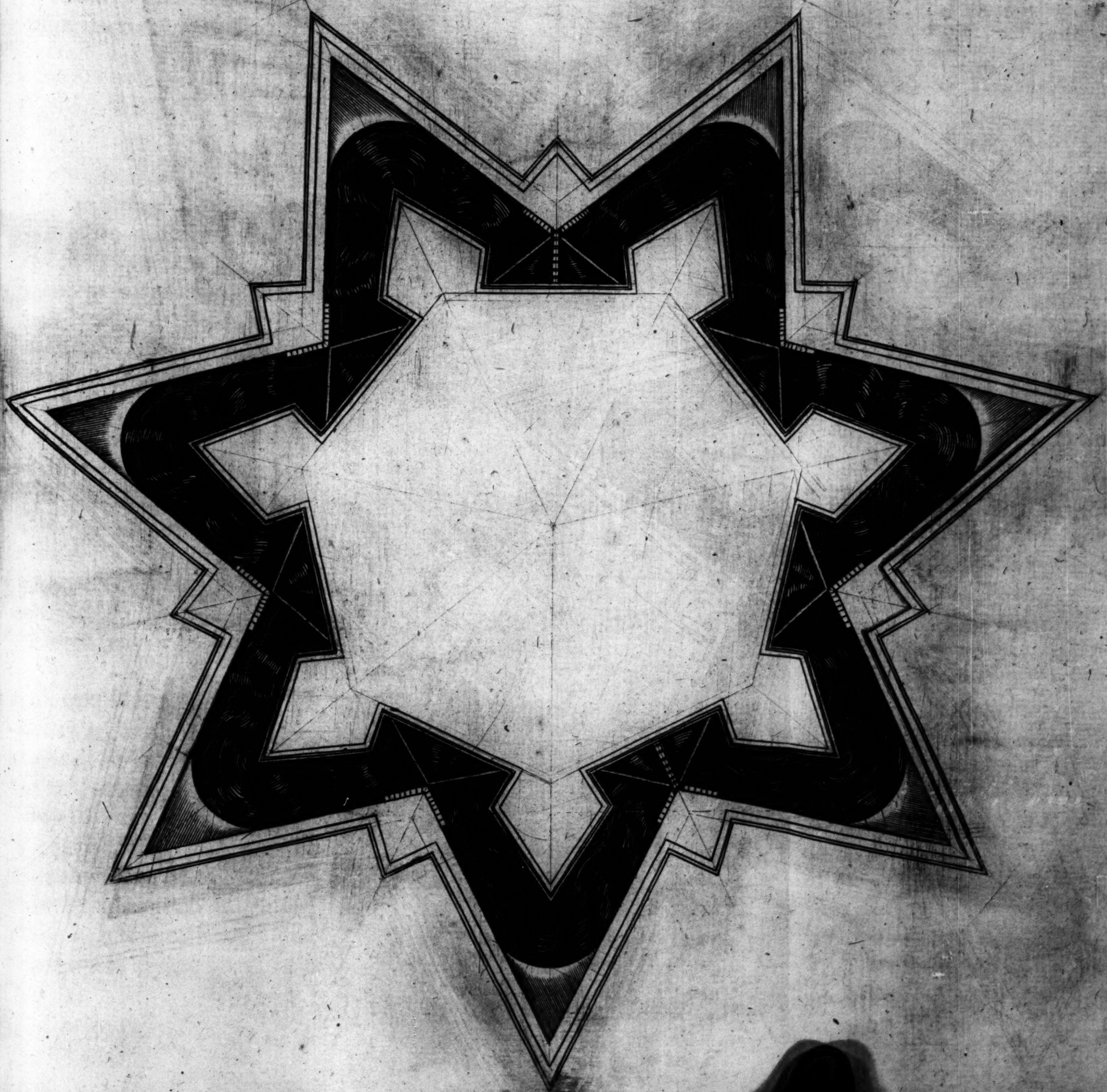
FOr the more security of castelles and stronge places are moſte comonly planted in their fronte haulfe-mounes oppen on the inwarde ſide, in which for their better securitie, is wonte of righte to be agarde every day and nighte, vnder which ſhelter the gates of the towne or caſtell are made for their better security from the fury of the greate ordenance, as alſo for other reſpectes, and that they may diſcover the enemy, and hinder their deſignes. It is very requiſit that the ſoſſo or ditch be deepe and broad enough, and that the curtines be of goode heighte that withoute greate difficulte it can not be ſcaled.

For the better aſurance of all ſtronge places, it is neceſſary that they by well provided with ſtronge and vigilante watches, and for many goode reſpectes that no company which ſhall inter the watch ſhall knowe their a pointed place till the verie time that the watch is ſet (or a litle before) for feare of treaſon by ſome provoked by intereſ, or proceedinge trough affrontes, or greate injuries received from the Governor touchinge their reputation or honoure or meanes.

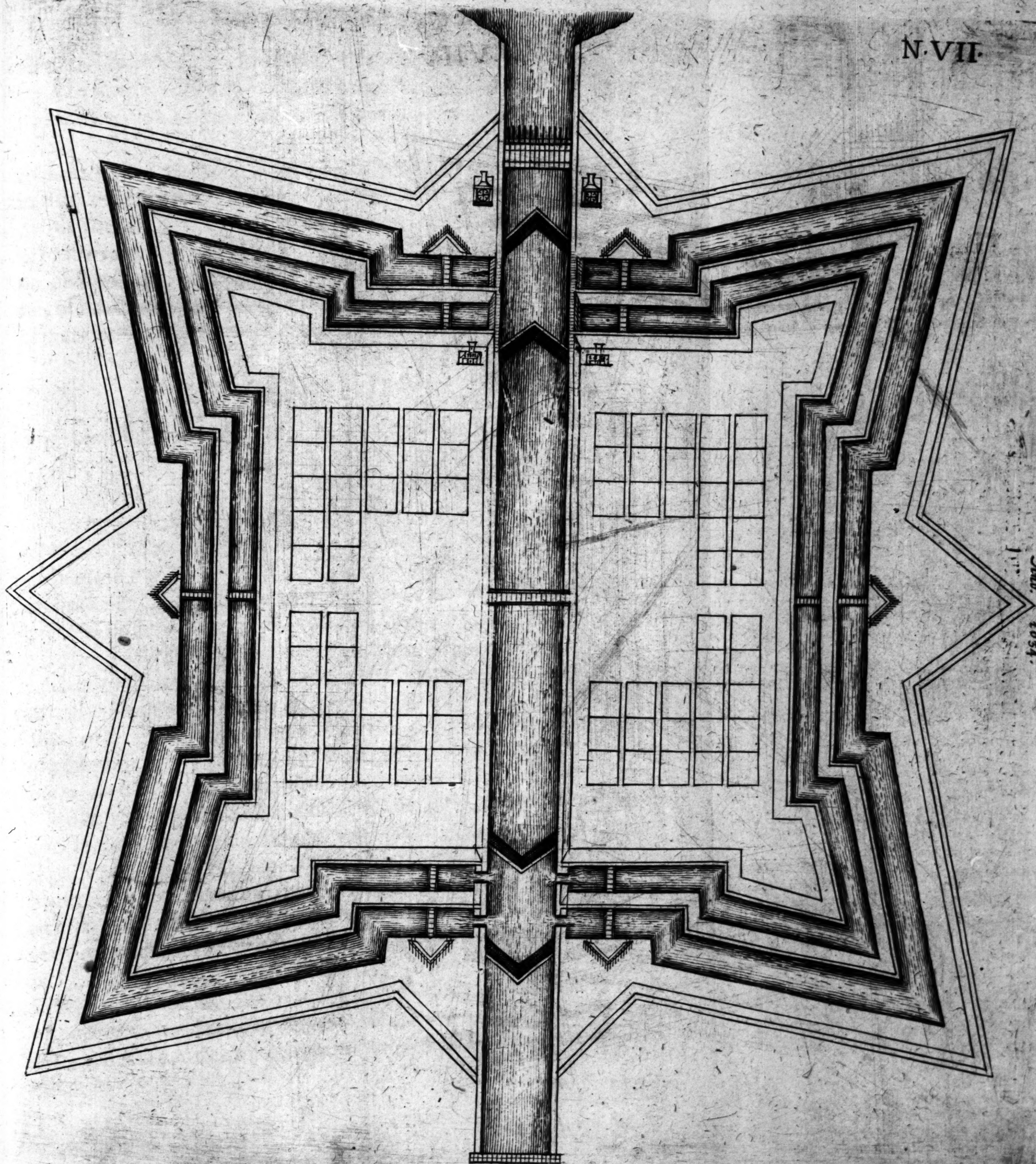
It alſo may procede of ſome of bad govermente and inclinationes, for which cauſe they are not preferred nor advanced, it may alſo be invented by burgeres, who bienge overmuch opreſſed with tyranny, and findinge no conveniente remedy nor juſtice executed for hainouſe factes and diſorderes comitted, do procure treaſones and revoltes.

When any ſuche ocaſion is ſuſpected or feared the roundes are to be doubled, and ſende contraroundes of Officeres and men of greate truſte, for the vigilance care truſte and fidelitie hoped of them, for prudente and carefull ſouldiores maketh eaſie materes of greate diſ-

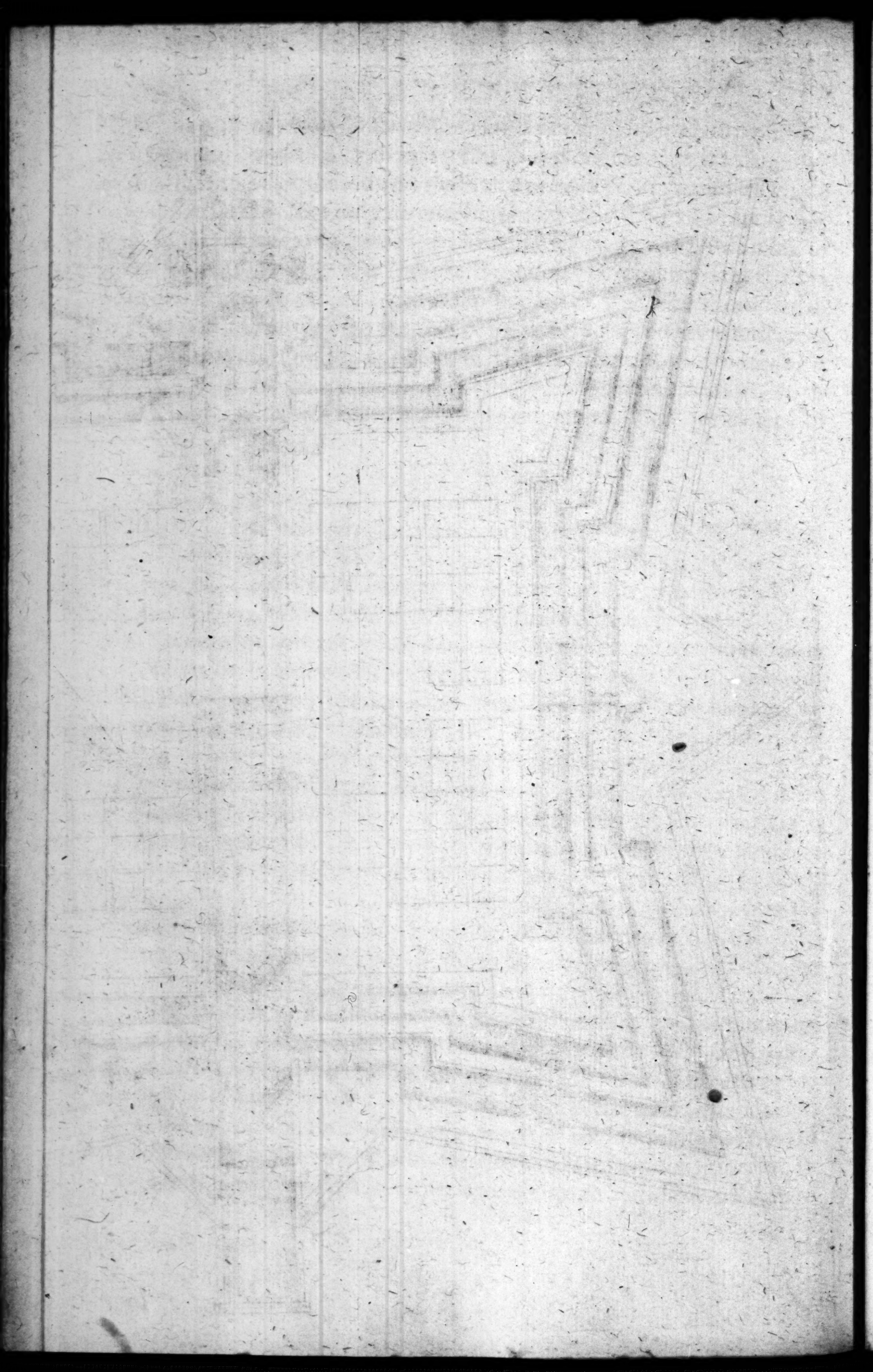




N.VII.



Jan. 1634.



difficultie, and by their care and vigilance do bringe them to a goodde ende to their greate honoure and perpetuall fame, resultinge of their brane and prudente cariadge and goodde aplicationes, resolute valour and care: All brane souldiores oughte to be of full resolution to indure all travailes and hardnes when ocation shall require, and in thies extremities to shewe them selves with greate couradge, fidelitie and obedience, for an honorable souldioris to by tried in time of mooste necessitie; where in deed such as are of brane spirites and generous minde doe manifeste their affection and valoure in occasions of mooste extremitie, as by dayly experience we see in occurrantes of warr, of the which many examples may be declared.

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THe security of stronge houldes and fortresses dependeth of the goodde order and vigilance of the Governores and reste ministres of the same, and that, as well within as withoute side bothe by polencie and Military Discipline, in ministringe goodde justice betwexte the inhabitantes and souldiores, and in ordaininge a goodde and vigilante watch, and to be well provided of all necessities in due time. And preventinge the stratagemes and plottes of the enemy in as muche as can be, havinge alwayes an eye towards the burghers and souldiores, consideringe their humores condicions and fidelity, their shoulde by alwayes secret spies to learne of their estate and humores, and whate they communicate in secrett and publike, and finally their actiones and inclinacions, and to have goodde regarde of suche strangeres as do arive into such places, if they be people well knowne or not faithfull or suspected.

In the occurrantes and courses of warr, greate and many are the considerations required in the generall of an army, and in his counsell of warr, in prudently preventinge many materes of greate importance, of presente and future ocationes (with aforcaste prudente prevention) which otherwise bienge induced (do often fall oute to the greate discomodity of his Majesties service) in atemptes of many honorable interprises and encounteres, to the greate decay of Military Discipline, which by dayly experience wee see, that for wante of prudente conductores of care truste and fidelity, many honorable interprises are losse, resultinge of the litle perfection of many Officers.

A matter wourdie to be noted examined and prevented for the due ordering of future occasions, of whate resulteth that so many ould and experimented souldiores of the late reformationes in germany and lowe country wente on the contrary side to the greate discomoditie of the house of austria, sence which time who many millo-nes were consumed in raisinge of newe levies and recrutes for the furtherance of the warres of the lowe countries, yea to my judgemente as muche as mighte intertaine an invincible army of ould and experimented souldiores, duly paid and satisfied. By dayly experience we see that thies newe levies for the moste parte, in occasions of service fewe were founde to asiste; whiche i haue noted and pittied often times, for bienge so greate alet to his Majesties service: The Omnipotent inlighten his Majesties faithfull ministeres in preventinge in due time the conveniente course of a matter of so greate importance: And agreate enemy for the vnprofitable consuming of his Majesties treasure and *Indies*. Let none thinke that i disalue recrutes and reforinge of companies in their due time and conveniente course, profitable to his Majesties service. Vndeniable it is that an army well disciplined ordered contended, and conducted with prudente and brane comaunders, though les her in number are by all reason masters of the victorie, which all auctores that wrote of this arte do asirme, and by dayly experience we finde to be true.

The repose and securitie of a Kingdom or state dependes for the moste parte in observinge goode lawes, goode warres, and continual practice of Military Discipline, wherof there are very many probable examples, as plainely hapened to *Anibal* that renoomed Captaine of warr, and to the invincibel Romaines that at lenghte in neglectinge Military Discipline and exercise of armes was cause of their perdition; and when they leaste feared of any a tempes of their enemy, and that resultinge for bienge wholie given to vice, regalitie and repose, and forgetfull of all Military exercise.

Happie is that Kingdome where goode lawes and goode discipline is in continual vse and exercise, and alwayes ready for the prepared vice and malice of their enemy, ready for the alarme when it shall presente, whiche often happen when we leaste thincke uppon. Happie is the Prince, and renoomed the Generall who prudently doth prevente the prepared malice and stratagemes of their enemy and of future occasions.

I doute not but those of perfection and deepe judgemente in the
arte

arte of warr shall both admire and comende the extraordinary paines taken for the due ordering of this wourke and in explicatinge and putinge to lighte many deepe curiosities of rare importance in the office of the Sardgente-Mayor, and ingienes of Fire wourkes, as also the due and prudente ordering of severall sortes of weapones managed in warr. All which with their neowe invented impalinge of shott and winges, and their singular order to fighte, as also other deepe curiosities of this arte whiche were leifte in obscuritie by many auctores who wrote of this profession. And that to disperse the ingenious wittes of those inclined to learne the rare and deepe curiosities of Military science, that they may imitate them (in obtaininge their desire) with longe and continuall practice and goode aplications, which nowe i reduced to lighte in as muche as military science, the rules of mathematicke and arithmeticke can affourde, with their generall rules, proufes, proporfiones and tables, neowly invented for that purpose, plainly sheowing the reasones of each particular, breefly declared in the tables of the battelles, and in severall figures cut in coper and wood plates: Not doubtinge but those of perfecte judgemente in the deepe and rare curiosities of this arte will comende the same, and a firme that as yet no auctor did explicate more plaine nor better of many particularities leifte in obscurity in Fire-wourkes and specially in the office of a Sardgente mayor, which nowe are reduced into the perfecte forme ordained for their executions in as muche as military science and the generall rules of the same can affourde. So that suche as are courious and inclined to continuall goode aplications, and determined by vertue prude[n]t cariage and perfection in Military Discipline to be advanced may in shorte time learne all the particularities in the office of a Sardgente Mayor, leifte in obscuritie by many auctores; Whiche nowe in this wourke are plainly broughte to lighte in as muche as military science can affourde or declare, whiche is not obtained by vaine glory nor heere say.

But rather with longe and continuall practice and aplications in the theorick and practice of warr; with intente and desire to enlighten my beloved countrimen and otheres, that they may knowe howe to acomplishe their obligationes with prudence and auctoritie, and aplee them selves with care and affection, in learninge this noble arte of warr, and not to be inclined to idelnes and bad examples, garded with malice, inuy, puffinge pride and rude ignorance, overcaste with afaulse fisnomy and aneowe malifious conterfet

countenance, enemy to vertue, truthe, plaine dealinges and goode examples. But rather by vertue and goode aplicationes wounde the hartes of raylinge spirites ful of ambition and changinge dispositiones, misled with blinde malice, venemouse and slanderouse tounge, harbored in their cancored hartes, full of crucked dealinges and in-vy, subjecte to afrontes and vices, of bad life and bad ende, but honorably to imitate and followe the steppes of those inclined to vertue and continuall goode aplicationes.

THE CONCLUSION.



Entle reader consider that vertue and continual goode aplicationes and plaine dealinges is a preiouse guel, and moſte comonly are wonte to haue goode proceedinges, and finiſh with a happy ende.

Suficiente examples oure Irish naſion gaue nowe of late for to imitate vertue plaine dealinges and goode religion, By diuine power beſtowed, on that noble and renoomed coronell *Butler*, in prudently preventinge the trechery and prepared malice of *Valſene* and his Counſeleres againſte the houſe of Austria, Whiche the omnipotent beſtowinge on him that ſpecial grace, and that to be thoughte reſultinge of the vndeniable truth, and plaine dealinges of his, and his predeceſſores, and of his renoomed Captaines and ſouldiores that were with him in that honorable interprice of perpetual memory.

Plainely mighte it by vnderſtode that thies Irish bienge ſo fewe in number, that for the executinge of ſo greate, ſo dangerouse, and almoſte vneſpected and impoſſible acte of armes, (That it muſte by a giſte beſtowed of the diuine power, for the benefit of truth and vertue of theirs (and predeceſſores) ſtil groundinge and obſervinge true religion and vertouſe life, ſo that they warded this renoomed warriar *Valſene* with a blowe of his mortal ende, with abucker inuio-
rened with diuine defence, and proſperitie to the houſe of Austria, and of perpetual renoome and glorie to oure Irish naſion. The omnipotent inlighten vs to imitate the vndeniable true dealinges, vertue and reſolute determination of thies famous warrieries, and others of this naſion, inclined to vertue and goode examples. So that
rooted

rooted rancor of inuy, slanderouse railinge tongues and crouched maliciouse dealinges may not take place, in equallinge them selves with the honorable obseruers of trueth, vertue, goode aplicationes, and Military Discipline. But rather banish thos inclined to the wicked vice of inuy, moother of mischises and base inclinationes, resultinge of barbarouse proude blinde ignorance, enemy to vertue trueth and goode proceedinges, subjecte to quarells, bakbitinge, murmuringe, disgraces, and bad examples, a penetrater of ranckored hartes, of unconsiderate understandinge, litle featinge God or man, of litle conscience or reputation, dayly decayenge and fallinge unto many odiouse crimes and disgraces, enemy to frindship and acorde, subjecte to afrontes and vices, of bad life and bad ende; And which of all things is moeste untollerable, and moeste odiouse in this noble profession of armes.

Gentle Reader youe see who many goode and probable examples set dowue in many places of this worke, (for to imitate vertue) and followe the steppes of the renoomed, prudente, and valerouse Souldior, and that in many places youe finde sufficiente examples, howe many borne of lowe degre, and base linadge, have attained unto grea- te degries, dingnity, and fame of perpetuall memory, and that resultinge of their vertuse cariage, renoomed actes, resolute determinations, and continuall goode aplicationes; And by dayly experience we see thos inclined to vice, unruly factes, and bad examples do fall unto decay, and many disgraces, and are hated by those inclined to vertue; and moeste comonly suche as do not amende do finish their lives with an unhappy and miserable ende. Soe i take leave besechinge the Omnipotente to give us the grace, that we may live in his feare with unity and acorde, and finish with a happy ende. Amen.

The Ende of the thirde Booke.

THE CONTENTES OF THIS VVourcke set downe in breefe.



IN the firste Booke are contained the military instructions necessary to be observed in the noble profession of armes amongste the Infantry, from a private Soldier, till the election and office of a Campe-master of a Regimente of Infantry.

The seconde Booke treatinge of the election of a Campe-master generall, whiche nexte to the Captaine generall is the cheefe conductor of an army, after followes the election of the Captaine generall of the Artillery, and finishenge with the office of a Captaine generall of an army.

The thirde Booke treatinge of Fire-wourckes of rare executions by sea and lande, and of the confines of a Kingdome, and the goodlawes to be observed in the same, and howe it is to be fortified by arte or by nature, or by bothe, to withstande the enemyes attempts, and the necessary courses conveniente to be taken.

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Campaigna rasa, a Spanish wourde is to say
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Campe Master generall a Spanish deriva-
 tive is to say the high marshal of the fil-
 de.
Castallano, is the cheef comaunder of a
 castel.
Cannonnero, signifieth a guner.
Cavalleria, a Spanish wourde signifieth
 souldiores a horse bake.
Cavallero a Spanish wourde signifieth a
 gentelman, in some places, it signifieth
 a high mounte of earth wheruppon
 greate ordenance is planted to disco-
 ver the filde.
Center is the juste midell of a battel or
 other thinge.
Cintinell, a Spanish wourde a souldior
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Coloures a wourde in vse in English for
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25

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26

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Trough ſiniſter election do reſulte many diſ-	

TABLE.

disgraces and lothes.	21	much bagade or traish.	5
The accomplishing of orderes som times are hurtefull, for certaine confiderationes.	23	Very many raised into greate dingnitie be their vertue.	2
Theſarios their Military goode instructiones.	38	Vandos or proclamationes to by duly observed for many respectes.	36
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		When the army ſhall encampe the firſte nighte the houre vvhiſche is appointed for the ſcoutes of horſe to retire.	150

For the breefe explicatinge of the diuiſionēs of ſeveral ſortes of armes and of ſeveral ſortes of battelles; i did put downe amongſte the chiſeres of their diuiſionēs and tables the letteres followinge for their breefe explicatinge.

THe letter A. amongſte the chiſeres of the diuiſionēs ſignifieth arcabuſe.

The letter P. ſignifieth drie pikes or vnarmed pikes.

The letter C. men armed with complet corceletes.

The letter M. muſketieres.

The letter R. ranckes.

The letteres Fr. fronte of the battell.

The letteres Fla. flancke of the battell.

The letter G. ſignified gilted corceletes.

T A B L E Errores in the printe.

Errores.	Corrected.	Folio.	Line.
harely	hardly	10	10
yerie	very	3	5
hoth	both	2	33
avartionese	avaritionese	7	6
toe	two	8	4
Turkose	Turckes	9	12
respeed	respected	10	27
lodgedh	lodgheth	11	11
hut	but	12	25
discomndionse	discomodious	15	17
Craptaine	Captaine	16	28
Officerer	Officeres	19	12
Sprine	Spaine	21	4
practe	practice	21	18
coddi	boddy	21	32
minth	ninth	23	27
or	of	29	4
bridged	bridges	35	14
plainelle	plainly	42	1
folowet	folowe	51	18
wolled	woulde	121	6
weather	weader	132	4
campiana	campaigna	132	23
this	his	135	18
patre	parte	136	10
the	he	141	34
7	6	105	23
foore	forte	156	22
truth	trueth	163	12
parte	partes	178	1
doabe	dob	179	13
eaches	enches	181	31
27	72	138	9
smelted	melted	188	25

Some letteres of smale importance in the correction may be is forgotten, which i refer to the judgemente of the curiouse and gentle Reader.

APRO.

A P R O B A T I O N.



HIES Military instructiones of Captaine GERAT BARRY
bienge visited by order of his Majesties privy Counsell; by the
Censor of Bruxeles, and aproved by the Archbishop of Maklin
the 9. of December, 1633. his saied Majesties privy Counsell
founde it profitable and comodious for the advancemente of his
Majesties service; wherfore they granted licence for the printinge of the same,
as by the contentes of their patente and broade zeale doth appeare: Defendin-
ge that in paine of the penalties contained in the saied patente, that no Printer,
or any other boddi, shall printe, conterfet, or sel the saied Booke within the
limites of their jurisdiction for the space of six yeares, nexte insuenge withoute
full consente and commission, in writinge of the saied Captaine. Dated at
Bruxells the 15. of January, 1634.

HENRICUS CALENUS, sacrae Theologiae
Licentiatus, Archipresbyter Bruxellensis,
Librorum Censor.

FIdem facimus positam Censuram esse legitimam, ab eo nimirum qui ad hoc
à nobis commissus est. Actum Bruxelle 9. Decembris 1634.

JACOBUS Archiepiscopus Mechliniensis.

THE

THE PRIVILEGE.



PHILIPPE by the grace of God Kinge of Castille, Leon, Aragon, and of both the Sicilles, of Hierusalem, Portugall, Navare, Grande, Toledo, Valencia, Galicia, Mallorca, Sevilla, Sardena, Cordoua, Corsica, and Murcia, Jean Algarues, Algesite and Gibraltar, of the Iles of the Canaries, easte and Weste-Inges, of the Iles and continente of the ocean sea. Arch-

ducke of Austria, Ducke of Burgondie, Lothier, Brabante, Limburcke, Luxenburgh, Gildres, and Millan: Earle of Habsburgh, Flandes, Artoies, Burgondie Thiroll, Palatin, Henawe, Holande, Zelande, Namure, Zutphen: Prince of Suban, Marques of the holly Impyre of Rome, Lorde of Friselande, of Salinas, Machlin, of the city and countrie of Vtreghte, Over-yssel and Groninge, Dominator of Asia and Africke.

BE IT KNOWN TO ALL MEN to whom thies presentes shall a peere that we haue received the homble suplication and petition of oure wel beloved Captaine GERAT BARRY Irishman, oure pensioner at the Zass of Gante, Specifieng that wheras he is desirous and willinge for the goode and advancemente of oure service; as alsoe for the goode and generall vtilitie of his countrimen, and otheres who followes the warres (to inlighten them and cause to by printed) a certaine booke which he hath writen in Inglish, cauled and intitulated *Military Discipline*, conteininge diuers obligations, instructiones and directiones, apertaininge to the Professores of this arte, as alsoe of fortificationes and inventiones of Artificiall Fire-wourkes, offensives, and defensives be sea and lande. And in respecte that the saide impressiō can not be permitted or suffered withoute oure speciall warāte and permissiō, he hōbly beseecheth vs that we woulde by pleased to grante him the same for seavē yeares.

BE IT KNOWN to all men that wheras we havinge considered the aforesaide, and scene in oure privy Conunsell the Aproba- tion of the censure done, and performed be the Archbishop of Macklin in the revewe of the booke above mencioned. And oure speciall favor inclininge to the suplication and petition of the saide Captaine GERAD BARRY oure petitioner. We haue permitted consented and auctorised, and by thies presentes oute of oure speciall grace (we doe

doe permit consente and auctorise) givinge him full permission and power to cause printe the saied Booke by any Printer dwellinge in oure countries in thies partes ; whome he shall please to choose , and afterwarde to cause sell and distribute them in and trougoute oure foresaied countries, prohibitinge, and defendinge all other Printeres Booke, seleres and other persones who soever, not to conterfett, printe , sell nor distribute the same duringe the time and tearme of six yeares nexte insuenge ; withoute permission and express consente of oure saied petitioner , or of whome he hath chosen and given auctoritie for the saied impressiō ; as alsoe for the felling of them. And that in paine of confiscation and losse of all that shall be printed, and moreover to incurre and pay the some , of six florince for every copie that shall be founde to by printed , soule or distributeth , withoute the aforesaied comission and consente of oure petitioner Captaine GERAT BARRY , and the one haulfe to be applyed to oure profit, and comoditie ; and the other to whome the saied Captaine hath chosen as before declared, and that in the maner , and acordinge to theire agrimente and a corde paste betwexte them. To be vnsterstoode that the Printer who is chosen shall be oblidge to conforme him selfe with the proclamation made and published uppon the arte of printinge. Besides that when the whole impressiō shall be finished, he shall be obliged to deliver in the handes of oure Secretary havinge singned thies presentes, two copies of the saide bookes, and that verie netly bounde ; to be given for the augmentation of oure library, as it is apointed and ordained.

OURE WILL IS therfore and we comaunde oure wel beloved and trustie Counselleres, oure Presedentes , and all otheres of oure privy and greate Counsell, and all other oure Officeres, justises, and subjectes, that upon oure presente grace, priviledge, aprobatō, permissiō and consente. They doe cause suffer and permitt, the aforesaied petitioner, as also whome he shall choose to printe, sell and distribute the saide bookes, to injoy fully and peaceably, and to vse duringe the time, and acordinge as before declared and ordained, withoute doinge, givinge or suferinge, to be made don or offered any trouble, hindrance, or wronge to the contrarie. For suche is oure will and pleasure, in witnes wherof we haue comanded oure greate zeale to be affixed and put to thies presentes. Given at oure city of Bruxelles the twelwe of December one thousander sixhondereth thirty of three yeares and of oure Regne thirtinth.

By the Kinge in his Counsell G. Ottingnus.

doe permit contents and authors) give him full permission and
 power to cause printe the said booke by any Printer dwelling in
 our countie in this parre, whom he shall please to choose, and
 otherwise to cause sell and distribute therein and throughout our
 forsaide countie, prohibiting, and defending all other Printers,
 Booke sellers and other persons who soever, not to counterfeit,
 printe, sell nor distribute the same during the time and terme of
 six years next ensuing; without permission and express consente
 of oursaide petitioner, or of whom he hath chosen and given au-
 thoritie for the said impression; as also for the selling of them.



of our Regne thirteenth.

December one thousand six hundred thirtieth. Given at our city of Brisselles the twelfth
in witness whereof we have commanded our great seals to be affixed
and put to this prelates. Given at our city of Brisselles the twelfth
of our Regne thirteenth.

and put to this prelates. Given at our city of Brisselles the twelfth
in witness whereof we have commanded our great seals to be affixed
and put to this prelates. Given at our city of Brisselles the twelfth
of our Regne thirteenth.

of our Regne thirteenth.

By the King in the Council. C. O. 1. 1. 1.

